

```

1  TGGCAGTGGG CGGCGTAGAG CACTGCAGCA GCAATGACGG AGGGCACGTG
51  TCTGCGGCGC CGAGGGGGCC CCTACAAGAC CGAGCCCGCC ACCGACCTCG
101 GCGCGTGGCG ACTCAACTGC GAGAGGGGCC GGCAGACGTG GACCTACCTG
151 CAGGACGAGC GCGCCGCGCG CGAGCAGACC GGCCATGGAAG CCTACGCCCT
201 GGGGCTGGAC ACCAAGAATT ACTTTAAGGA CTTGCCCAAA GCCCACACCG
251 CCTTTGAGGG GGCTCTGAAC GGGATGACAT TTTACGTGGG GCTGCAGGCT
301 GAGGATGGGC ACTGGACGGG TGATTATGGT GGCCCACTTT TCCTCCTGCC
351 AGGCCTCCTG ATCACTTGCC ACGTGGCAGC CATCCCTCTG CCAGCCGGAT
401 ACAGAGAAGA GATTGTGCGG TACCTGCGGC ACATTGAGGA TAAGTCCACC
451 GTGTTTGGGA CTGCGCTCAA CTATGTGTCT CTCAGAATTC TGGGTGTTGG
501 GCCTGACGAT CTTGACTGG TACGAGCCCG GAACATTCTT CACAAGAAAG
551 GTGGTGCTGT GGCCATCCCC TCCTGGGGGA AGTTCGTGGT GGCTGTCCTG
601 AATGTTTACA GCTGGGAAGG CCTCAATACC CTGTTCCCAG AGATGTGGCT
651 GTTTCCTGAC TGGGCACCG CACACCCCTC CACACTCTGG TGCCACTGCC
701 GGCAGGTGTA CCTGCCCATG AGCTACTGCT ACGCCGTTCG GCTGAGTGCC
751 GCGGAAGACC CGCTGGTCCA GAGCCTCCGC CAGGAGCTCT ATGTGGAGGA
801 CTTCGCCAGC ATTGACTGG TGGCGCAGAG GAACAACGTG GCGCCGACG
851 AGCTGTACAC GCCGCACAGC TGGCTGCTCC GCGTGGTATA TGCGCTCCTC
901 AACCTGTATG AGCACCACCA CAGTGCCAC CTGCGGCAGC GGGCCGTGCA
951 GAAGCTGTAT GAACACATTG TGGCCGACGA CCGATTACCC AAGAGCATCA
1001 GCATCGGCCC GATCTCGAAA ACCATCAACA TGCTTGTCGG CTGGTATGTG
1051 GACGGGCCCG CCTCCACTGC CTTCCAGGAG CATGTCCTCA GAATCCCGGA
1101 CTATCTCTGG ATGGGCCTTG ACGGCATGAA AATGCAGGGC ACCAACGGCT
1151 CACAGATCTG GGACACCGCA TTCGCCATCC AGGCTCTGCT TGAGGCGGGC
1201 GGGCACCACA GGCCCGAGTT TTCGTCCTGC CTGCAGAAGG CTCATGAGTT
1251 CCTGAGGCTC TCACAGGTCC CAGATAACCC TCCCGACTAC CAGAAGTACT
1301 ACCGCCAGAT GCGCAAGGGT GGCTTCTCCT TCAGTACGCT GGACTGCGGC
1351 TGGATCGTTT CTGACTGCAC GGCTGAGGCC TTGAAGGCTG TGCTGCTCCT
1401 GCAGGAGAAG TGTCCCATG TCACCGAGCA CATCCCCAGA GAACGGCTCT
1451 GCGATGCTGT GGCTGTGCTG CTGAACATGA GAAATCCAGA TGGAGGGTTC
1501 GCCACCTATG AGACCAAGCG TGGGGGGCAC TTGCTGGAGC TGCTGAACCC
1551 CTCGGAGGTC TTCGGGGACA TCATGATTGA CTACACCTAT GTGGAGTGCA
1601 CCTCAGCCGT GATGCAGGCG CTTAAGTATT TCCACAAGCG TTTCCCGGAG
1651 CACAGGGCAG CGGAGATCCG GGAGACCTC ACGCAGGGCT TAGAGTTCTG
1701 TCGGCGGCAG CAGAGGGCCG ATGGCTCCTG GGAAGGCTCC TGGGGAGTTT
1751 GCTTACCTA CGGCACCTGG TTTGGCCTGG AGGCCTTCGC CTGTATGGGG
1801 CAGACCTACC GAGATGGGAC TGCCTGTGCA GAGGTCTCCC GGGCCTGTGA
1851 CTTCTGTGTC TCCCGGCAGA TGGCAGACGG AGGCTGGGGG GAGGACTTTG
1901 AGTCCTGCGA GGAGCGGCGT TATGTGCAGA GTGCCCAGTC CCAGATCCAC
1951 AACACATGCT GGGCCATGAT GGGGCTGATG GCCGTTCGGC ATCCTGACAT
2001 CGAGGCCCAG GAGAGAGGAG TCCGGTGTCT ACTTGAGAAA CAGCTCCCCA
2051 ATGGCGACTG GCCGCAGGAA AACATTGCTG GGGTCTTCAA CAAGTCCTGT
2101 GCCATCTCCT ACACGAGCTA CAGGAACATC TTCCCCTATC GGGCCCTCGG
2151 CCGCTTCTCC CAGCTGTACC CTGAGAGAGC CTTGCTGGC CACCCCTGAG
2201 AACATGCCCTA CTTGCTGGGT GCCGTCTGTG CGTTCCAGTG AGGCCAAGGG
2251 GTCCTGGCCG GGTGGGGAG CCCTCCCATG ACCCTGTCTT GGGCTCCAAC
2301 CCCTCAACCT CTATCTCATA GATGTGAATC TGGGGGCCAG GCTGGAGGCA
2351 GGGATGGGGA CAGGGTGGGT GGCTTAGACT CTTGATTTT ACTGTAGGTT
2401 CATTTCTGAA AGTAGCTTGT CGGGCTTGGG TGAGGAAGGG GGCACAGGAG
2451 CCGTGACCCC TGAGGAGGCA CAGCGCCTTC TGCCACCTCT GGGCAGGCC
2501 TCAAGGTAGT GAGGCTAGGA GGTTTTTTCT GACCAATAGC TGAGTTCTTG
2551 GGAGAGGAGC AGCTGTGCTT GTGTGATTCC TTAGTGTCGA GTGGGCTCTG
2601 GGCTGGGGTC GGCCCTGGGC AGGCTTCTCC TGCACCTTTT GTCTGCTGGG
2651 CTGAGGGACA CGAGGGCAAC CCTGTGACAA TGGCAGGTAG TGTGCATCCG
2701 TGAATAGCCC AGTGCGGGGG TTGCTCATGG AGCATCCTGA GGCCGTGCAG
2751 CAGGAGCCCC CATGCCCTG GGTCTGAGC TTGCTGCGT ATGGGGTGGT
2801 GTCATGGAGC CTCATGCCCC TGGGTCTGTA GCTCGCCTGA GTATGGGGTG
2851 GTGTATGGA GCCGCATACC CCTGGGTGTG GAGCTCGCCT GCATATGCAG
2901 GGTCTGTCTG GGAACATCCC AAGTCTGTGC AGCAGGGAGC CCCATGCCCC
2951 TGGGACATGA ACCCACCTGC GTGGAATGCT GTTTGTGAGG TGTCTACAGG
3001 GTTTATAGTA GTCTTGTGGA CACAGAAATG CACAGGGGAC ACTTACGGAC
3051 ACAGAAATGC ACAGGGGAGG CCGAGCATAA CCAGGGGTGA GGGGCAGGCA
3101 GCAGTTGTAG TTACTGCCGC GGGGCACTGC TATGTGCAGG GACAGCCAGC

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FIGURE 1A

```

3151 GCCCAGCCCA TCACCACTCC CTGGGCTGGC TGGCAGGTAT GGCACCTGG
3201 GAGCCCGGCA TATACCCAGG GCACCCCTAC GGCTGCCGCC AGTCTCATGC
3251 CCAGGTGGGT GCTCTGGGCT GGAGCGAGGG CCAGGTTTGT GGCCGAGGCT
3301 TCCCAGGCA ATCCTGTGAG CTCCCTTCTA GCCTCTGACC CAGTCTGGTC
3351 TGGCTTGCAAT GGATGTAGGG CTTGGGGTGG GAAGTTCAGG TCCTGGCTTT
3401 GCCTTTGCCT GATGTGGATG AGCAGCTCAC ATGCTCAGGG CCACCTGAGA
3451 CTGTCACTGC TCTCCCTGG CTACTGGGAG GAGTCACTGA GAGCTTCGTT
3501 ACCCTTGCTG CCTTGCCAG GGCACACCCT ATACCTCCTC ATCTGTCTT
3551 CCCCTCCCCTG CCGCCTTCTG GGCAGGTAGC AGTCCCCTGGC CTCTCCCCCT
3601 GGCTGATCAC TCTCCCTCAG GCAGTGGAGA TCTGCGTCTG GACACCCTCA
3651 GATCCTGTCA TTGCCCTGCC AGAGTCCTTC AGGGGCACCC CTCTGCCTTG
3701 GTGTGCGGTC CAGGGCTCTC ACCCAGGTGC CGCACCTCTT GGGGTCTTCT
3751 GTCCAGCTCC CTTGCCCCAT GTGCTGTAC TGACTCTCCT TGGGACTCGC
3801 CTGCCTGCTC AGAGCCCTGC AGGGCTTGGT CAGCTGCCTG TTCAGTGTCA
3851 ACACTTCCCT GCACATCTTA AAAGTGGGCT TTATTTTCGC TGAAGGAACT
3901 GTGTTGGGAC CCTTGACATC TGTCAGGTTT GCACATGCTG TTTTTCCTT
3951 TCAGCCACAG TGTTCCTCCC CACGTGGGGT AGCAGCAGGA CAGACAGTGA
4001 ATCAGAGAGT CTGCCCTGAG CAGAGGCTGC TGTCCCTGGG ACTCCTAGCC
4051 ATGGTCAGAC TGTACAAAAC GGTTTTCAG AAATGAAATG TAAATCCATT
4101 TTTATACTGA AAATGTTACT GAAAGTCACT TTTATGAGCA TCTGCCTTAA
4151 TAAACAGACA TTGATTCCCT TAAAAA AAAA AAAA AAAA (SEQ ID NO:1)
4201 AAAAAA AAAA AAAA AAAA AAAA

```

#### FEATURES:

```

5'UTR:      1-33
Start Codon: 34
Stop Codon: 2197
3'UTR:      2200

```

#### Homologous proteins:

##### Top 10 BLAST Hits

	Score	E
CRA 18000005000949 /altid=gi 4505027 /def=ref NP_002331.1  lano...	1530	0.0
CRA 18000005227733 /altid=gi 4808278 /def=emb CAB42828.1  (AJ23...	1524	0.0
CRA 18000005013642 /altid=gi 1098635 /def=gb AAA91023.1  (U3135...	1315	0.0
CRA 18000004977416 /altid=gi 1352388 /def=sp P48450 ERG7_RAT LA...	1305	0.0
CRA 18000005002424 /altid=gi 984145 /def=emb CAA61078.1  (X8780...	1224	0.0
CRA 100000004433519 /altid=gi 8886139 /def=gb AAF80384.1 AF1599...	689	0.0
CRA 335001098658178 /altid=gi 11279144 /def=pir  T48782 lanoste...	611	e-173
CRA 18000005223063 /altid=gi 4589852 /def=dbj BAA76902.1  (AB02...	609	e-173
CRA 18000005171896 /altid=gi 3688598 /def=dbj BAA33460.1  (AB00...	607	e-172
CRA 1000682333668 /altid=gi 6045133 /def=dbj BAA85266.1  (AB033...	605	e-172

##### BLAST dbEST hits:

	Score	E
gi 10993792 /dataset=dbest /taxon=96...	1538	0.0
gi 10159427 /dataset=dbest /taxon=96...	1358	0.0
gi 9340844 /dataset=dbest /taxon=960...	1108	0.0
gi 11251687 /dataset=dbest /taxon=96...	1065	0.0
gi 11258382 /dataset=dbest /taxon=96...	995	0.0
gi 10322370 /dataset=dbest /taxon=96...	910	0.0

FIGURE 1B

**EXPRESSION INFORMATION FOR MODULATORY USE:**

library source:

From BLAST dbEST hits:

gi|10993792 teratocarcinoma

gi|10159427 ovary

gi|9340844 uterus

gi|11251687 muscle

gi|11258382 brain

gi|10322370 colon

From tissue screening panels:

hippocampus

**FIGURE 1C**

```

1 MTEGTCLRRR GGPYKTEPAT DLGRWRLNCE RGRQWTWYLQ DERAGREQTG
51 LEAYALGLDT KNYFKDLPKA HTAFEGALNG MTFYVGLQAE DGHWTGDYGG
101 PLFLLPGLLI TCHVARIPLP AGYREEIVRY LRHIEDKSTV FGTALNYVSL
151 RILGVGPDDP DLVRARNILH KKGGAVAIPS WGFVWLAVLN VYSWEGNLTL
201 FPEMWLFPDW APAHPSTLWC HCRQVYLPMS YCYAVRLSAA EDPLVQSLRQ
251 ELYVEDFASI DWLAQRNNVA PDELYTPHSW LLRVVYALLN LYEHHSASHL
301 RQRAVQKLYE HIVADDRFTK SISIGPIST INMLVRWYVD GPASTAFQEH
351 VSRIPDYLWM GLDGMKMQGT NGSQIWDTAF AIQALLEAGG HHRPEFSSCL
401 QKAHEFLRLS QVPDNPDPYQ KYRQMRKGG FSFSTLDCGW IVSDCTAEAL
451 KAVLLLQEK PHVTEHIPRE RLCDAVAVLL NMRNPDGGFA TYETKRGGHL
501 LELLNPSEVF GDIMIDYTYV ECTSAVMQAL KYFHKRFPEH RAAEIRETLT
551 QGLEFCRRQQ RADGSWEGSW GVCFTYGTWF GLEAFACMGQ TYRDGTACAE
601 VSRACDFLLS RQMDGGWGE DFESCEERRY VQSAQSQIHN TCWAMMGLMA
651 VRHPDIEAQE RGVRCLEKQ LPNGDWPQEN IAGVFNKSCA ISYTSYRNIF
701 PIWALGRFSQ LYPERALAGH P (SEQ ID NO:2)

```

#### FEATURES:

##### Functional domains and key regions:

[1] PDOC00001 PS00001 ASN\_GLYCOSYLATION  
N-glycosylation site

Number of matches: 2

```

1 371-374 NGSQ
2 686-689 NKSC

```

[2] PDOC00005 PS00005 PKC\_PHOSPHO\_SITE  
Protein kinase C phosphorylation site

Number of matches: 5

```

1 149-151 SLR
2 247-249 SLR
3 149-151 SLR
4 247-249 SLR
5 494-496 TKR

```

[3] PDOC00006 PS00006 CK2\_PHOSPHO\_SITE  
Casein kinase II phosphorylation site

Number of matches: 7

```

1 49-52 TGLE
2 72-75 TAFE
3 238-241 SAAE
4 434-437 STLD
5 518-521 TYVE
6 591-594 TYRD
7 624-627 SCEE

```

FIGURE 3A

[4] PDOC00008 PS00008 MYRISTYL  
N-myristoylation site

Number of matches: 11

1	76-81	GALNGM
2	107-112	GLLITC
3	142-147	GTALNY
4	173-178	GGAVAI
5	369-374	GTNGSQ
6	487-492	GGFATY
7	552-557	GLEFCR
8	564-569	GSWEGS
9	571-576	GVCFTY
10	577-582	GTWFGL
11	595-600	GTACAE

[5] PDOC00825 PS01074 TERPENE\_SYNTHASES  
Terpene synthases signature

563-577 DGSWEGSWGVCFTYG

**Membrane spanning structure and domains:**

Helix	Begin	End	Score	Certainty
1	95	115	1.321	Certain
2	173	193	0.944	Putative
3	569	589	1.311	Certain

FIGURE 3B

**BLAST Alignment to Top Hit:**

```
>CRA|18000005000949 /altid=gi|4505027 /def=ref|NP_002331.1|
    lanosterol synthase (2,3-oxidosqualene-lanosterol
    cyclase); Lanosterol synthase; human lanosterol synthase
    [Homo sapiens] /org=Homo sapiens /taxon=9606
    /dataset=nraa /length=732
    Length = 732

Score = 1530 bits (3917), Expect = 0.0
Identities = 720/732 (98%), Positives = 721/732 (98%), Gaps = 11/732 (1%)

Query: 1   MTEGTCLRRRGPPYKTEPATDLGRWRLNCERGRQWTWYTLQDERAGREQTGLEAYALGLDT 60
Sbjct: 1   MTEGTCLRRRGPPYKTEPATDLGRWRLNCERGRQWTWYTLQDERAGREQTGLEAYALGLDT 60

Query: 61  KNYFKDLPKAHTAFEGALNGMTFYVGLQAEDGHWTDYGGPLFLLPGLLITCHVARIPLP 120
Sbjct: 61  KNYFKDLPKAHTAFEGALNGMTFYVGLQAEDGHWTDYGGPLFLLPGLLITCHVARIPLP 120

Query: 121 AGYREEIVRYLR-----HIEDKSTVFGTALNYVSLRILGVGPDDPDLVRARNIL 169
Sbjct: 121 AGYREEIVRYLR          HIEDKSTVFGTALNYVSLRILGVGPDDPDLVRARNIL 180

Query: 170 HKKGGGAVAIPSWGKFWLAVLNVSWEGLNTLFPBMWLFPDWAPAH PSTLWCHCRQVYLP 229
Sbjct: 181 HKKGGGAVAIPSWGKFWLAVLNVSWEGLNTLFPBMWLFPDWAPAH PSTLWCHCRQVYLP 240

Query: 230 SYCYAVRLSAAEDPLVQSLRQELYVEDFASIDWLAQRNNVAPDELYTPHSWLLRVVYALL 289
Sbjct: 241 SYCYAVRLSAAEDPLVQSLRQELYVEDFASIDWLAQRNNVAPDELYTPHSWLLRVVYALL 300

Query: 290 NLYEHHS SAHLRQRAVQKLYEHIVADDRFTKSI SIGPI SKTINMLVRWYVDGPASTAFQE 349
Sbjct: 301 NLYEHHS SAHLRQRAVQKLYEHIVADDRFTKSI SIGPI SKTINMLVRWYVDGPASTAFQE 360

Query: 350 HVSRI PDYLWMGLDGMKMQGTNGSQIWDTAFAIQALLEAGGHRPEFSSCLQKAHEFLRL 409
Sbjct: 361 HVSRI PDYLWMGLDGMKMQGTNGSQIWDTAFAIQALLEAGGHRPEFSSCLQKAHEFLRL 420

Query: 410 SQVPDNPDPYQKYRQMRKGGFSFSTLDCGWIVSDCTAEALKAVLLLQEKCPHVTEHIPR 469
Sbjct: 421 SQVPDNPDPYQKYRQMRKGGFSFSTLDCGWIVSDCTAEALKAVLLLQEKCPHVTEHIPR 480

Query: 470 ERLCDAVAVLLNMRNPDGGFATYETKRGGHLELLNPSEVFGDIMIDYTYVECTSAVMQA 529
Sbjct: 481 ERLCDAVAVLLNMRNPDGGFATYETKRGGHLELLNPSEVFGDIMIDYTYVECTSAVMQA 540

Query: 530 LKYFHKRFPEHRAAEIRETLTQGLEFCRRQQRADGSWEGSWGVCFTYGTWFGLEAFACMG 589
Sbjct: 541 LKYFHKRFPEHRAAEIRETLTQGLEFCRRQQRADGSWEGSWGVCFTYGTWFGLEAFACMG 600

Query: 590 QTYRDGTACA EVSRACDFLLSRQMDAGGWGEDFESCEERRYVQSAQSQIHNTCWAMMGLM 649
Sbjct: 601 QTYRDGTACA EVSRACDFLLSRQMDAGGWGEDFESCEERRY+QSAQSQIHNTCWAMMGLM 660

Query: 650 AVRHPDIEAQERGVRCLLEKQLPNGDWPQENIAGVFNKSCAISYTSYRNIFPIWALGRFS 709
Sbjct: 661 AVRHPDIEAQERGVRCLLEKQLPNGDWPQENIAGVFNKSCAISYTSYRNIFPIWALGRFS 720

Query: 710 QLYPERALAGHP 721
Sbjct: 721 QLYPERALAGHP 732 (SEQ ID NO:4)
```

**FIGURE 3C**

**Hmmer search results (Pfam):**

Model	Description	Score	E-value	N
PF00432	Prenyltransferase and squalene oxidase repea	83.9	1.7e-22	3

**Parsed for domains:**

Model	Domain	seq-f	seq-t	hmm-f	hmm-t	score	E-value
PF00432	1/3	133	154 ..	23	45 ..]	6.6	3.8
PF00432	2/3	547	589 ..	1	45 []	40.1	8e-10
PF00432	3/3	599	647 ..	1	45 []	39.4	1.3e-09

**FIGURE 3D**

```

1 TCATGACTGC CCCTAGAAGC TTAACGTGT CAATTCTCAG ACGTAGTTTA
51 CAGCTTTTTC TTTTCTTTCA GACATTAAAA AGAGCGGATT ATTTTACTCA
101 TAAAAAGTCC AGTCCATTAA GATATCAAAA CTCAAACTCT TATCCAGTTG
151 AAACCTCTTC CCTCACCTAG CTTTGCCAGG TTCAGTGTGA GATTCCATCC
201 AGGCTGAAGC CCCTTATCCC TATTCTTCAT GTTTCTACAT GGAGGAACTT
251 ACCTGGAGAA AAACCTCCAG CCTCTTTCTG CTTCCAGAGA AGTAGAGTGA
301 CTCATTTGAT TGAATTTTCA AGAACAGATA GGGTGGAGTG TGCTCAGGCT
351 CCTCTGGGTA CTCTTTCTGG GGTCTGTGGG TTGACTGGAG GGGTGTCTTC
401 TGGTGGGCAC TCAATTGCAT AGTGCTTGGT GAGGCAGTTT CATGGCCTAG
451 AGGCTGGGGG ATATGTTTGT CTGACTTACG GGTGATTTAG TAGCTTGCCC
501 TCTTGCTTGC AGATTTAAGC CTTGTCTTC AAGCTAGGTT TTTAATTTGT
551 GGCAAAGCTG ATATTTTATG ACCCACCCAT CTTATTGCTG TGTCTTTTTC
601 ATCCGTTTCT GAACCTGGGAT AGGAAGAGGT GATTATCCTT GATTGTCTAA
651 AACCCCGCTA TTCCACTGTG GGAAGGTGC CTGTGGGTAT TCTTTTGTCC
701 ACTCTCTCTT CCAACTTTCT CCTCCGGCTT GCTGTGGCTC ACCGCCCTT
751 CGAAGTTAGG CTGGGGGTAG GAATTGAGGA GTGGGTGCCG AAATGCTCAC
801 TAGGCTGGGG CAGTTGTAAC TGGATGTCAG GGCTTCTGTG GGCCAGGTGA
851 AGACATGCTG GGGTCTTCTG TGGGTCCCTG ACCTGACTTA GGGACCACTG
901 GCTGCAGCCT CCAGACGTCA GCCATGTTTC CAACAGTCAG ACGCCCCCTG
951 CCCTGTTGCG CCCGGCTGTC CCTTCCAAGT TCGGTCACTC GCTCTGCCTC
1001 CATCTTCTCT TTCCCTCTGC TGCTAAGGCT TTTACACTTT AATTTCTCCT
1051 GGGGCCACCC CCAACTCCAG CGACCCCGTG AGCAGCTGAG GCTCTACCGC
1101 GCTCGGTCTT GGCAGCGAC GCAGCCCTTC CCTGGCGGGG CTCCAGGGCT
1151 TCTGGCCCTT GTGGTCCGCC AGGTGTGGGG GCCCACGGCC TCACCGCGCC
1201 TACCCACTCT CCCCCGGCGA AGCTACGCGG CGCTCAGCTT CCCAGGGACG
1251 CCGGCGGCGC CCTCGGCTCC TCCGCTCCGC CCGGCCCTCC CCCTGGTCTC
1301 GCACTGGAGC CGACGGCCCG CGCCACCTC ACCTCAGGGC GGCTCCCCG
1351 CCCCACCCCG GGCCCCGGCG TCCGGGCAA TCCTGCAGCG CGAGAGCAAT
1401 TCCCTGCCAC CCGACCTTCG CACTCGCTGT CGCTCGCTCG AGCCTCGCTC
1451 CCCACGCTCT TCCTTCCGAC CCGCGGCTGG ACCCTCCTCA CAAATTTCTC
1501 AGAGAGGCTC ACCTCAAAGC GCGGCGCACG AGGCCGGGCT CCGGGGACGC
1551 AAGCCTCTAG AGGGCGCGCG AGAGGCCCCG CCCCCGCCCT TCGGCCCCAC
1601 CCACCAGCCC CGCCCCCACC CGCACCCACC AGGCCCCGCC CCCACCTCCC
1651 CACCCACCAG CCCCAGCCCC ACCTCCCCAC CCACCAGCCC CGCCCCCAT
1701 GCCCCGCCAA TAAGGCCCCA CCGCCTCCC CCGTCCCCTC GCCTTACCCC
1751 ACCATCCCCG CTCCCTCAGG CCCCAGCCCA CGCCGATGG GGCACCAAGC
1801 GCTCCACCAC TGTGTCGCC TGGCACACC CGGGGTCACG CTCGCGGCGC
1851 TCTGATTGGT TCGGTGGGCG TCGGCCACC TAAGCCTGAG CGCCTGCCGA
1901 GGCCTGCGCC TCGTAGTGC GCGCGGGAGG GCGGGAGGG GCGGGAGGG
1951 CGGGAGGGG GGGGCTGGG GGCAGGTCCC GGGTGGGAC ATCTGGCAGC
2001 TGGCAGTGG CGGCGTAGAG CACTGCAGCA GCAATGACGG AGGGCACGTG
2051 AGTCCCTCG CCCCAGGCTC CTGACGAATG CCGGGTGGTC CTAGGTGCTG
2101 AGGAGAGCG GACTGGGCA GTGGGCCGGC GGCCGGCGTT GGGGCGGGG
2151 CTGGGTCGCT GATGGCCGT GGTCTCAGG TGTCTGCGGC GCCGAGGGG
2201 CCCCTACAAG ACCGAGCCCG CCACCGACCT CGGCCGCTGG CGACTCAACT
2251 GCGAGAGGG CCGGCAGACG TGGACCTACC TGCAGGACGA GCGCGCCGC
2301 CGCGAGCAGA CCGGCTTGA AGCCTACGCC CTGGGGCTGG ACACCGTAAG
2351 TTGCTTCCGC GGAGCGTCAG CGAGCTCGGG ACCCTGAGGG GTGAGCCGTG
2401 AGGAGCACGT TTTCTCTCAG AAAGGCGGGT GGGAGGACCC GGCCAGCGAC
2451 GCCCATCCCC AAGCGAGCG CCCACGGGAA CTGCGTTCGC GGGCCCCCTC
2501 GCTTCAGCCC CTTATCTCT AAACCACGCA TAGGAGACTC CTAATGTTTT
2551 ATTTTTTAGC ACCTTATTTT GAGATAATTT TTGACTTATA GGAGAGTTGC
2601 AAAGATAGTT GTAACTTTGT TTTTATTAC AAAAAGTGT TGGATCCACT
2651 GTCTTAGTTG TGTGCATTGT AAGAGATTTT GGTGTCAGA GTCTGCAGTG
2701 TAAACAGGGT CTCCTGCCGA GCCCCGCCA CCGAGGAAA GGCTGTGCCG
2751 CCCCTTGGG CCTCTTTGAG AGGCCCGAGT CCCAGGCCA GGTCCGGCAC
2801 CGTGCCCCAC CTTACAGTCT GGTGCTTG TTTATTCCAG ACATCTTGA
2851 GAAGTTGTGA AGAATACATG ACTGGCAAAT AAAGCAACGA AAATGTGCAG
2901 CTGTTCTTTT ACTTTGCTGA GGTGTGATGC TCTCATCAA GAGTTTCAGA
2951 CTTTTGATGG AAACAGCTGA AACTTTTAA GTAATTTACA TTCAGTTT
3001 TGACTTGGGC TGTATGTGAA GAGGGTTCCT CTGGCCGGC AACAGTCCG
3051 TCAGCTATCT CTTTTTTTTT TTTTCGATCT CTTTGCAGAA GAATTACTTT
3101 AAGGACTTGC CCAAAGCCCA CACCGCCTTT GAGGGGCTC TGAACGGGAT

```

FIGURE 3A



3151	GACATTTTAC	GTGGGGCTGC	AGGCTGAGGA	TGGGCACTGG	ACGGGTGATT
3201	ATGGTGGCCC	ACTTTTCCCTC	CTGCCAGGTA	GGAGTATGCT	GCCCCAGCCT
3251	GATGGTATGG	CCACCCCTGGA	TCACCCCTGG	GATCCTGGCC	CAGCCTGGTC
3301	TAGGGTTTTG	ATGAAGCAGG	TGAAAATCCA	GGGGCTCACA	AGAAAAGGGC
3351	TGGCAAATC	TGCCCTATGT	CAGAGTCGTC	CTGCTATTGG	TCTAGGGGAT
3401	CAGCTAGCCT	TGCCAGTGTA	GGGTGACAGG	CTCTCTGATA	AGAGAAGCAA
3451	GTGGTTCTCT	AGGGCTCTGT	GTTGCCTTGA	GGGAGGAGGA	AGGTGGGCTT
3501	TGAAGTCTCA	GTACAGGATG	GGATGGACAT	TCCAGGTGGA	AGGCCAGCC
3551	TATGCCAAGG	GGCTGTAGGT	GGGCAGAGTG	GTGGGTGGGG	AGCTGATATC
3601	TGCTGTGAAC	TTCCCTCGGG	CTATTGCAGG	AGAGCTTCAG	GTTCAGGCTG
3651	GTGATAGGA	GGAGCATAGC	AGTTGGACTG	CCTGGGTATT	GAAGTGATTT
3701	GGCTACACAA	GACTATTTTG	CATCCTGGGA	GTGTTTCTCT	ACAGAAATCC
3751	TCAGCCTTGT	AAAATGGGAA	ATTCCCTCCT	ATGAATTTAT	GCAATAGGAC
3801	TTTTTTCCCT	AGTGACTTGT	AATCACATTG	TTTCAATGAC	GTGAATTCCT
3851	ACATAAATAG	GTTTTGTTC	TGTGATAACT	CTTACTGATA	CATCATTTTC
3901	TTTTACTACG	CTGACTTTGT	AATAGATAGA	AAGTCCCTAT	ATACCTTTGT
3951	TGCCTTTCTT	TTTAAACAT	CTCTTACCTG	TGCTATTCA	TTTACTCATC
4001	CAAATTGCCCT	TTATCCTGAT	TTTGTCCCAG	ACTTGAAATG	AAGTTGCAAT
4051	AGGCTTATAT	GTTAGTTTGG	GAAGAGTTGG	CCTTTAACGT	TAAAAACAGT
4101	TCCATGGTGT	TTACTGTAGG	CCAAGCCCTG	CTCAAGGCCT	GTTCTTCTTT
4151	TAGTCCCTAG	AATAAGCCTA	ATGAGATACA	TTAGAAAGCT	GAGGCACATT
4201	TATTCCAGGT	AACCAGACTA	GCAGGAGGAG	CACTGGGATC	CCCATCTCTG
4251	CTTTGACTTC	TAGCCCTGCT	GCCACCTGGA	CTGTACAGCA	TTGAGTTTTT
4301	CTGTCCCTGG	ATTTGAGGGC	CTGTCCCTAG	GGGAAGTCAA	GGTGCTCTTC
4351	TTCCCTTGGC	CCCATCAGGG	CCTGTTTAGA	CTGTTCTCAG	GGCTCGTGGT
4401	AAGGCAATGA	CATAGAGTTG	GTCAGGAGAT	GGGTCAGCCC	CACTTTGCCT
4451	CTGTAGCCTG	ACCTGTGACA	GGATTGGAAT	CAGGTTTGGT	CATGTGCACA
4501	GTGTCAGGCA	TGCAGTGGTG	CTTGGTCAGT	GGGGATTACT	GTGTTGTTTG
4551	TTCTTGCTGC	TTTGGCTCTG	GGCTTAGCTG	GCTGGGACCC	TTCTGTGGG
4601	CTGGCTGTGA	GTTGGAGTTT	TTTTGTATTT	TTTTTTTTTT	TTTGAGACAG
4651	CGTTCGCTCT	TGTTCCCCAG	GCTGGAGTGC	AATGGCACAA	TTTTGGCTCG
4701	TTGCAGCCTC	TGCCTCCTGG	GTGCAAGTGA	TTCTCCTGCC	TCAGCCTCCT
4751	GTAGGGTCCA	GCCCCACAGG	GTCGGTAGGT	TTTTCTCCCT	GTGTGCGGAG
4801	ATGAGAGATT	GTAGAAATAA	AGACACAAGA	CAGAGAGATG	AAAGAAAAGA
4851	CAGCTGGGCC	CCGGGGGACC	ACTACCACCA	AGACGTGGAA	ACCGGTAGTG
4901	GCCCTGAATG	CCAGGCTGCG	CTGATATTTA	TTGGATACAA	GACAAAGGGG
4951	CAGGGTAAGG	AGTGTGAGCC	ATCTCCAATG	ATAGGTAAGG	TCACATGGGT
5001	CACGTGTCCA	CTGGACAGTG	GGCCCTTCCC	TGCCTGGCAG	CCGAGGCAGA
5051	GAGTGGGAGA	GAGAGAGAGA	GAGACAGCTT	ATGCCATTAT	TTCTGCATAT
5101	CAGAGACTTT	TAGTACTTTC	ACTAATTTTG	CTACTGTTAT	CTAAAAGGCA
5151	GAGCCAGGTG	TACAGGGTGG	AACATGAAAG	TGGACTAGGA	GCGTGACCAC
5201	TGAAGCACAG	CATCACAGGG	AGATGGTTAG	GCCTCCGGAT	AACTGCGGGT
5251	GGGCCTGACT	GATGTCAGGC	CGTCCCACAA	GAGGTGGAGG	AGTAGAGTCT
5301	TCTCTAAACT	CCCCCGGGA	AAGGGAGATT	CCCTTTCCCG	GTATGCTAAG
5351	TAGCGGGTGT	TTTTCTTTGA	CACTGACGCT	ACCGCTAGAC	CACGGTTGGG
5401	TCCGCTTGGC	AACGGGCCTC	TTCCAGATG	CTGGCGTTAC	CGCTAGACCA
5451	AGGAGCCCTC	TAGTGGCCTT	GTCCGGGCTT	AACAGAAGGC	TCTCACTCTT
5501	GTCTTCTGGT	CACTTCTCAC	TATGTCCTTT	CAGCTCCTAT	CTCTGTATGG
5551	CCTGGTTTTT	CCTAGGTTAT	GATTGTAGAG	CGAGGATTAT	TATAATATTG
5601	GAATAAAGAG	TAATTGCTAC	AAACTAATGA	TTAATGATAT	TCATATATAA
5651	TCATATGTAT	GATCTAGATC	TAGTATAACT	CTTGTTGTTT	TATATATTTT
5701	ATTATACTGG	AACAGCTCGT	GCCCTCGGTC	TCTTGCCCTG	GCACCAAGGT
5751	GGCTTGCCAC	CCACAGCCTC	TCGAGTAGCT	GGGATTACAG	CCATGTGCCA
5801	CCATGCCCTG	CTAATTTTTG	TATTTTTGGT	AGAGACAGGT	TTTCACCTTG
5851	TTGGTCAGGC	TGGTCTCGAA	CTCCTGACCT	CGTGATCCCC	CACCCCCCAC
5901	CCCCAGCCTC	CCAAAGTGCT	GGGATTACAG	GCGTGAGCCA	CTGCACCTGG
5951	CTGAGTTGGA	GCTTTTCTTC	CCTCTTTTTG	GACTTTGGAA	AATGCTCTTG
6001	GTCCATGATG	CTATGTAGAC	AGCTCCCGTT	GACTGTGGCC	TGTGCGGCAT
6051	TGGGCAGCAC	TCTGGTGAAC	ACTGAATCGG	GTCTGACCTC	CTAGCCCCAC
6101	CATTTACTGG	CTGAGCCTCA	GTTTCCCTTG	CTGTAAATC	AGGAAGATGC
6151	TGGCTCTGCT	CCTCTCTGCA	CATTTCCCGG	TCCTAACAAAC	ATTATAACTG
6201	TTAGGAAAGA	GACGGGCTTG	TTTTGGGATG	GCTCATTTTA	TGTGACCCCTG
6251	TGCGCTGTCT	CTGAGTCCAT	CTGCCCTTCT	TCCAGGTGT	AGGGACCAGC

FIGURE 3B

6301	CCCACAGGGT	CGGTGGGTCT	CTCCCTGTGT	GCGGCGATGA	GAGAGTGTAG
6351	AAATAAAGAC	ACAAGACAAA	GAGATAAAAG	ACAGCTGGGC	CCGGGGGACC
6401	ACTGCCACCA	ATGCATGGAG	ACCAGTAGTG	GCCCCGAATG	TCTGGCTGTG
6451	CTGTTATTTA	TTGGATACAA	AGCAAAAGGG	GCAGGGTAAA	GAGTGTGAGT
6501	CATCTCCAGT	GATAGGTAAG	GTCACATGGG	TCACGTGTCC	ACTGGGACAG
6551	GGGGCCCTTC	CCTGCCTGGC	AGCCGAGGCA	GAGAGAGGAG	ACACAGAGAA
6601	AGAAAACTTA	TGCCATTATT	TCTGCATATC	AGAGACTTTT	AGTACTTTCA
6651	CTAATTGACT	ACTGCTATCT	AGAAGGCAGA	GCCAGGTGTA	CAGGATGGAA
6701	CATGAAGGCG	GACTAGGAGC	GTGACCACTG	AAGCACAGCA	TCACAGGGAG
6751	ACAGGCCCTCC	GGATAACTGC	GGGCAGGTCT	GAATAATGTG	AGGCCCTCCA
6801	CAAGAGGTGA	AGGAGCAGAG	TCTTCTCTAA	ATTCCCCCGG	GGAAAGGGAG
6851	CCTCCCTTTT	CCGGTCTGCT	AAGTAGCGGG	TGTTGTTTCT	TGACACTTTT
6901	CGCTACCGCT	AGACCACCGT	CCGCTCGGCA	ACGGGCGTCT	TCCCAGACGC
6951	TGGCGTTACC	ACTAGACCAA	GGAGCCCTTT	TGCTGGCCCC	GTCCGGGCAT
7001	AACAGAAGGC	TCGCACTCCT	GTCTTCTGGT	CACACCTCAC	TATGTCCCTT
7051	CAGCTCCTAT	CTCTGTATGG	CCTGGTTTTT	CCTAGGTTAT	GATTGTAGAG
7101	CGAGGATTAT	TATAATATTG	GGATAAAGAG	TAATTACTAC	AAACTAATGA
7151	TTAATGATAT	TCATATATCT	CTAAGATCTA	TATCTGGTAT	AACTATTCTT
7201	GTTTTATATT	TTATTATACT	GGAACAGCTC	GTGTCCTCGG	TCTCTTGCCT
7251	TGGCGCCTGG	GTGGCTTGCC	GGCCACACAG	GGCATGTCTG	GATGGTTTGA
7301	ACACTAGGGC	TTCTGATGCT	CTAAGCCAGA	GTCAGGTATT	CATTCCATGG
7351	CACATGTGGC	TGGGGTCTGC	CCTGAGACCT	GTCCCGTGCC	AGGCTCTGGG
7401	GGCACATGGC	TGATGGAACC	AAGCATGGGG	AGTGAAGGTG	GAGGGTGGCC
7451	TGTGAGCACC	ATTGCTGAGA	GGACCAGGCT	GGGGACGGAA	GGTTCTTAGT
7501	GGATAATATT	TATTGTCTCT	GCCTCCCCCT	TGACATTTGC	AAAGCGGCAT
7551	ATGCTTGTA	AAAAATTTTG	AAACAGAAAA	ATATAAATAA	ATAAGTAGGT
7601	ATTACCACAT	GCAAGGGTGA	CCAATTTTGT	ATTTTCTTTC	CCAGCAGATG
7651	TTAAAGCAAG	ACCAACAGTC	TCCCCTCATG	GAAGGCCAC	TGATCTAAAA
7701	TGCTGGTTCC	TTTTGGACCT	TCAGGGCACT	TGGGGGAGAC	CTTCTTGAGG
7751	TGCTGTGCAG	TGTCTGGTGT	TTCTCAGACC	CAGGTGGTCA	TGGGAGCCAG
7801	GCGTGGCTGA	GTGGCTCTTA	CAGGCCCTAG	GCAGGGAGCA	TCGCCTGTGC
7851	TGTGGCTGAC	GTTCTTCTGC	GCCCTGTTCC	CAAAGTTCCC	CATGGGGGCC
7901	TGGGAGGAAT	GGCCTTTCCA	GGGGGTGTTT	TTATGAGAAG	GAGGTAGCTC
7951	CCTGTTGGAG	TGAGGTGCTC	AGGAGGAAAG	GGGCCTGGTC	TTAGCAGTCA
8001	TGACCACCTG	TCCCCAGTGA	GGAACATCTC	TCCTGCCACA	CAGGCCTCCT
8051	GATCACTTGC	CACGTGGCAC	GCATCCCTCT	GCCAGCCGGA	TACAGAGAAG
8101	AGATTGTGCG	GTACCTGCGG	TCAGTGCAGC	TCCCTGACGG	TGGCTGGGGC
8151	CTGTGAGTGT	GCCTGCCCTT	GTGTCACTGC	ACATGTGCAT	GTGTGTGTTT
8201	TCATGATGTA	GGAGATGCTT	GGGTTTCCAG	GCAGCTGCCA	GGGGTTAGGA
8251	GTGATTGCAG	CTGTGGGTGT	GGGGTGGGTG	AGGGAGAGAC	TAGCAGGCGG
8301	GGAGTGGGCT	GAAGGCCATG	CAGGTGGGGC	CTCGGCTTCA	CATCTTTTGT
8351	TAAATGGATT	TTGTGGCTGT	TACGACACTC	TTGAGACCCA	CATGTGAAAA
8401	CTGTCACTCT	GTTATCACTT	AAGACAGAAG	AAAATTGCCC	TTGACTCTGG
8451	GCTGGCAGCA	GGTGAGACA	AGGCCTGACA	GCTTTCCTGC	CATGTGGCAC
8501	ACACTTTGGG	AGCAGAGCCA	TAGCCCAAAG	TGGACCGCCC	TTGAGCTAGA
8551	AGTGTGACT	CAGGCGTGGG	AAGGTGTAGA	GCAGGCGGGT	CACGGTGAGG
8601	AAGGAGTGGG	GGGCTCAGTT	GTCATGGGAG	GTGCATGAAT	TCGTACTGCA
8651	GAGTGGCTGC	TCAGGGGTCT	CCTGTGTTGA	CATGTTATGT	CAGGTTAAGC
8701	CATTTTAGCA	TTCTTAGTTT	TCTGAGGAAA	CTCCACAGAA	AGTTTTGCCTT
8751	TATTTCTTAG	AAGTAAGGAC	AGATAACGGT	TTCTCACCTG	TCCTCTGCTC
8801	CTGTAGGCAC	ATTGAGGATA	AGTCCACCGT	GTTTGGGACT	GCGCTCAACT
8851	ATGTGTCTCT	CAGAATCTCT	GGTGTGGGGC	CTGACGATCC	TGACCTGGTA
8901	CGAGCCCGGA	ACATTCTTCA	CAAGAAAGGT	ACGGCATGTG	CAGCATGTGC
8951	TGGGCCAGGG	GTTTCGTGTA	ACTCGATAAT	GAGCTCTCAC	AAACGAGATA
9001	CAGAAAGATG	CACTTGCAGC	TGAAACAGTG	GGCAAAAGCA	CATGAGCAGG
9051	GAATTTGTCA	AAGCAGAAGT	AGGCAGACAC	TGTTTAACTT	AGGCATCATT
9101	TTTTTAAAAA	GCAAAATTAAG	AGCCAGGCAC	AGTGAGTGGC	TCACGCCTGC
9151	AATTCCAGCA	CTTTGGGAGA	CTGAGGTAGA	AGGACCACTT	CAACCTAAGA
9201	GTTTCGAGGCC	AGCCTGGGCA	ACATAGTGAG	ACCTGGTCTC	TACAAAAACA
9251	ATAAAATATT	AGCCAGGTGT	GATGATATGC	ACCTGTAGTC	TCAGCTACTT
9301	GGAGGCTAGT	AAGGCAGGAG	GATCACTTGA	GCCCAGGAGT	TCTGGGTGTC
9351	AATGAGCTGG	TTGTACTACT	GCACTCTAGC	CTGGGTGACA	GAGTGCGACC
9401	CTGTCTCTAA	TAAAATAAAA	AAGCCAAGCA	AACTAAGACA	ACCAGGTAAT

FIGURE 3C

9451 TCTGTTTTGTT TCCTGAATTG GCAAAACTT AAACGAACCG TGTAAATATG  
 9501 TCCACCTTCT GGGGGGCAGC CTGGCTGCAG GCAAGAGCAG CCCTGGAGCT  
 9551 TGCACCTTCC AAGCTGATCG TCTACCTCTC CAAGCCCGGG GCTGTCCACC  
 9601 TCTCCAAGCC CGGGGCTGTC CACCTCTCCA AGCCCGGGG TGTCCACCTC  
 9651 TCCAAGCCCC GGGCTGTCCA CCTCTCCAAG CCCC GG GTTG TCTTACCTCT  
 9701 CCAAGCCCCA ACTGTCTACT TCTCCAAGCC CTGGTCTGGC TACCTCTCCA  
 9751 AGCCCTGGGC TGTCCACCTC TCCAAGCGCC AACTATCTTT CTCTCCAAGC  
 9801 CCTGGCCTGG CTACCTCTCC AAGCCCCAGG CTGTCCACCT CTCCAAGCCC  
 9851 CAACTGTCTA CCTCTCCAAG CCCC GG CCGT GCTACCTCTC CAAGCCCCCTG  
 9901 GCTACCTCTC CATGCCCGGC CTGGCTACCT CTCCTCTTGC CTATAGGCCC  
 9951 TGAGGGGCAA TTCCAGCCCA AGGGAATCCA TGGCTCCTG TGCTCCAAGA  
 10001 AAACCTAGTT TATGTTGTGG CTCTGCAGAG CCTGGCCTGG TCTTGTCTC  
 10051 TGTGTTTTCAC AGACCTTCCG TAGCCAGTCC CACCTGCCCT GCTCTCTGCT  
 10101 GCATGCGCAG GGGCCTCCTG TCAGCTCCTC AGAGACCTTT ATTATCCCAG  
 10151 GGCTCGCCAT GCACTGCCCTC CTTCGCCCTG AGCCTCTTAC CTTCCACTCC  
 10201 TGCCCCGCTG GCTCACACTT TACGTGTTC TTCTTTGAGG ACCTCTTCCT  
 10251 GACCTACCGT GCCAGGTGGA GTGTCTGTG ACGCATTCTC ATGAGATCCT  
 10301 GCCTTCTTTT TTGGTGAGCT TGTCACATAT GTCCTCAGTT CACTGTGAGC  
 10351 CTTTGGGTGTC GTTGATGCTG CGTCCCCAAG GCTGCTGTCC GGTTCACC  
 10401 AACTCTCTGG CGCCTGCCCTG GTGAAGGAAC GTGTTTAGGC TGCACTTTGC  
 10451 CTAGTAGCTT TGTGGGTCTT TATTGACTTT TGCATACCTT TTGGGGTTTG  
 10501 GAGCAGGGAC TCCTCAGAAG CATGTTTAGA TGGTGTGGCT GTGCCAGGAC  
 10551 TGCTGCTGCT GAAGTGGCTC TGGCATGGGG CCAGCGTGCT GGAGCTACTC  
 10601 TGGAGTCTAG GTTCGTCTTT GTTCCCATAC AGGACCAGT TGCCAAGTGG  
 10651 AGATGACACA GACTGGGGCA GCTCAGGCTT GGCTCAGAGG GCGAGGCTGA  
 10701 GTGTGCGCTG TCACTTCCCC ACCTTGCCTT CTCCAGGCGC ATGTGCACCT  
 10751 GGGCCCCCTG CTCACCTGAG CACTGAGGTG TCCCTGGACC TTCCCAGGTA  
 10801 GCTGTCTTCA TGTGCTCCTT CCTGGGGCCA GGGGTGCAA ACACCTCTCC  
 10851 TGGGGCTGGA CACACACACT CCCAGGAAAG CCACCTGGTTC CACCTAGGGG  
 10901 GCCGTGTATC CAGGCAAGTT CTCAGCACTC TGGAACCTG TTCGCACATG  
 10951 GGGGTGCGAA GATCCACATG AGGCTGCCCT TGCCTCATGG AGAGGGGCAC  
 11001 ACGTGA CTCC CAGAGGGTGA AGCTTCCCAG CTAGAGGCAG TGCAGACTTT  
 11051 GCTGACAGGA AGCAGATGAC GTGGGCCCTAT TCTCTCCCCG CTCAGGTGGT  
 11101 GCTGTGGCCA TCCCCCTCCTG GGGGAAGTTC TGGCTGGCTG TCCTGAATGT  
 11151 TTACAGCTGG GAAGGCCCTCA ATACCTGTG CCCAGAGATG TGGTATGTCT  
 11201 GCTGTTGATT GGGTGTGTGG GTCGCTGCTG CTGTCCCGGG GAGTAGAGTG  
 11251 ACAGGGACCG TGGCTCAGGT GCAGGCTGTG ACAGCAGAGA GGGGTGGGCA  
 11301 TTCTGTGGGT GGGTGGAGTT AGGCTCCTGG CAGAGGCCCT GATCAAGCTT  
 11351 GAGTCTGTGA GGGGTACAGA AAGGGGGAGG TTCCCAATTG AGCAGGAAGA  
 11401 AGGCTGTGCC ATGGATGGAG GTACCCCGAG TCAGGCTGCA GGCAGGGCTG  
 11451 GGTGGCTTCC CTCTTGCTGT GGAAGACTCA GCATCTGTAG AAGTGGGGGG  
 11501 GTGCCCCCTC CCCAGCCTGC ACAGGGGCGT CCTGTGTTGC TGCTGCTGCG  
 11551 TTTGTTCTCT TTGCTGGTGA ATGTGAAGTG TGTCCCGAC TGACACCTCA  
 11601 CCTGTGGACT CAGCGTGTGT GCCTTTAAAA GATCAGTGTG TGTGGCCAGG  
 11651 TGGGGTGGCT CATGCCTGTA ATCCCAGCAC TTCGGGAGGC CGAGGCGGGC  
 11701 AGATCACGAG GTCAAGGGAT CGAGACCATC CTGGCCAACA TAGTGAAATC  
 11751 CCGTCTCTAC TAAAAATACA AAAATTAGCT GGGCGTGGCG GCGCGTGCCT  
 11801 CTAGTTTCCA GCTACTCGGG AGGCTGAGGC AGGAGAATCA CTTGACCCTG  
 11851 GGAGGCAGAG GTTACCGTGA GCCGAGATCG TGCCACCATA TTCCAGCCTG  
 11901 GCGACGGAGT GAGACTCTGT CTCAAAAAAA AAAAAAAAAA GATCAGTGT  
 11951 TGTTTTTTTA AACAGAACCA CATACTGTTT AAATACCCAG CAAAATCAAC  
 12001 ATTAATTTCT TATTATCTGG TGTGTGTTTT TTTTGTTTTG TTTTGAGACG  
 12051 GAGTCTAGCT TTGTCACTCA GGCTGGAGTG CAGTGGCGTG ATTTGGGGTC  
 12101 ACTGCAACCT CCGCCTCCCG GATTCAAGCA ATTCTCCTGC CTCTGCCTCC  
 12151 CGAGTAGCTG GGATTACAGT CTCAGGCCAT CACGCCAGC TAATTGTTGT  
 12201 ATTTT TAGTA GAGACAGGT TTTACTATGT TGGCCAGGAT GGTCTCAAAC  
 12251 TCCTGACCTC AGGTGATCCG CCTGCCCTGG CCTCCCAAAA GTGCTGGGAG  
 12301 CCATGAGCCA CTGCTCCCGG CCTTATGTGG TGTCTTTAAC CAGTGTCTTG  
 12351 TAACATTTTA TGGCTATCTA TTGAAAGCAG TGGACATCTC CCCAGAAAAC  
 12401 ACTCGTGCA TATGAGTTTAC CCCGTTATGC ATTTTGGGAA GTGAGACCCT  
 12451 GGAACCACAC AGAGCCCCCTG CTGGCTTCCT TGAGTGTGT GGGAACCCCTG  
 12501 GTGGGGGTGT CCCCTACAGA GCTATCATCA GGGCTGGGGG GGTCCCTTGT  
 12551 GTTAGATGAC TTTGGTGCGG GGGTGGGGG TGGGGGTCA AGTTAGGGGA

FIGURE 3D

12601	GGCAGGAAGT	GAAGGGGCCG	CTCAAGAAAG	GACAGCAGCA	GTGTCCTGAT
12651	GCAAAGGCCG	GGGGCTTAAC	CCCAGGAAGCC	AGTTTGGGTG	GTGACGGGGA
12701	GGCACAGGGA	TGGTGAGATC	ACCCCGGGAG	GGTAGACAGA	GATACACAGAG
12751	TAGGGGGCAG	GGTTAGGGTG	CCGTACCTG	AGGCGGGCCG	TAGAGCACAT
12801	AGGTTGGGAG	GTGTCCTGGG	GCCATTCAA	TGCCCGCTGG	ACTCTGCCCC
12851	TCGCCCCGTG	GTAATGAGCG	GCAGAGGAAG	GA CTGAGACG	GCAGTCAGCA
12901	CAGCTGCCAG	GGCAGGAGGG	GTGTGGGTTC	CACACGCTGG	TGCTGGTGAG
12951	GGCGTCTCAT	CTGCCCCACT	TGGGGGGGCC	GTCGGTCAGT	GCTGCCGCAT
13001	GGGCACGCCA	GGGTGCTGCT	TGTCTTTGCT	GGAGTTGCTT	GGAGGGTGGG
13051	TTGGGAGGTG	AAAGGAGGAC	CACAGACCTG	AACCACTCCA	GCTGCGAAAT
13101	GCTGGGAGTG	TAACCCAAA	TGTGAGAAAA	AAAAACACCC	TTTTAAGTAA
13151	GTGGGTGTGA	AAGTGGGCCA	AGGCCTGATG	CCACAGTCAG	GGAGCAGGGA
13201	AGGCTCAGCA	TTGCTCACCC	TCACTTAAGG	ATGGGGCTAG	CATCACATAA
13251	GGCATCACAT	AAGGATGGGG	GCTAGCAGGG	AAAGGGAGAG	AAAACACATG
13301	AGGCACACAC	AGACCCTGGG	AAGCTGGTGG	AGCTGTGCTA	ACGTCAGCAG
13351	ACCAGTGATC	AAAGACCCAG	GCCTTGGGGA	GATTCCACAG	ACCTACAGAC
13401	CTACAGTTTC	TTTTTCTTT	CTTTTCTTT	TTTTTTTTTT	TTTTGAGACA
13451	GAGTCTCTCG	CTCTGTCAAC	AGGCTGTGTG	CAGTGGCACA	ATCTCGGCTC
13501	ACTGCAACCT	CCTCCCAGGT	TCAAGCGATT	CTCCTGCCTC	AGCCTCCCGA
13551	GTAGCTGGGA	CTAGAGGCAC	ACACCACCAT	GCCTGGCTTA	TTTTTGTATT
13601	TTTAGTAGAG	ATGGGGTTTC	GCCATGTTGG	TCAGGCTGGT	CTCAAACCTC
13651	TGACCTCAAG	TGATCCACCA	GCCTCGGCCCT	CCCAAAGTGC	TAGGGTTACA
13701	GGCGTGAGCC	ACCGTGCCCC	TCCTAAAGTT	TCTTAAATAC	ACTTTTAAAA
13751	GTAACCTTTA	AATTTTGGAG	TAGTTTCCAA	TTTCTGGAAA	AGTTGCAAG
13801	ATAGCCAAGA	GTGTTCCCTG	GGGCCCTCAC	ACCATATCCC	CATTGTTGAT
13851	GTTTTATGTT	ACCAAGGTAC	GTTTGTGTGA	GCTAAGAAAC	CCACGGACAA
13901	TCCTAAGCAT	TTAGGAGCTC	CATCACCTGG	TTTTAGGATG	CAAATGCTG
13951	ACCGAAGTAG	GAGGTGCAGC	TCCTCAGAGG	GTGCACCTAT	GGTTCAACTG
14001	TGCCCCCTCAG	GAGCACGGTT	GGGAAATGCC	CGCAGATGCA	CTGACGTGGT
14051	GGGGAATACC	CATCCACCAG	TGTTCTGTGCT	TGAAAGGGCC	CAAGGTATGG
14101	ATGCTGGCGG	AGGGGGCAGG	CTTGAGTCTT	GGGGTCTCCC	ACTGACTCCT
14151	GCTGTTGCC	CAGGCTGTTT	CCTGACTGGG	CACCGGCACA	CCCCCTCCACA
14201	CTCTGGTGCC	ACTGCCGGCA	GGTGTACCTG	CCCATGAGCT	ACTGCTACGC
14251	CGTTCCGGCTG	AGTGCCCGCG	AAGACCCGCT	GGTCCAGAGC	CTCCGCCAGG
14301	TAGGACCTCA	TCAGGGAACA	AAGTGAAGGC	CTCTGGGGCT	GGGACCCACA
14351	GGGCCTGGGG	CTTCTGGAAT	CTAACCACAC	CTGTCCACTC	ACCTGGTGGC
14401	CCTGTGGAGC	GGAGAGCCCT	GTGGAGCAGA	GCCTCCACCT	TCCTCCATCC
14451	TATAATAAAC	AGTGAGCAAG	CTCTGCCCAG	AGGGGACTTG	TGCTATGGGA
14501	CAGTCAGTAG	CTGTAGCCCA	GGGTTCCTGG	GGGGGACTTC	CAGGACTCAA
14551	GGGATGCAGG	AGGCAGATGT	GCCTGTGTGC	CTCTGGAAGC	AGGCCTGAGG
14601	CGAGGTTTGA	GGTGCAGGAT	GTTTATCAGG	CCTGCCATGG	GGAAGAAGGA
14651	GGGGCAGAGG	GAGGAAATGA	GCTTCTGGGC	AGACCTGGGA	CTCATGGAGC
14701	TGGGGAGCTC	CTCAGAGCGG	TCCTCCCATA	GGGGGCCCTC	ATGTGCCCTC
14751	GGGGTCAAGT	GCTGGAGGGA	CCCCACCCA	GGAAGGGACT	GGCCAGGGC
14801	CCTGAGGGCG	GATGGTGGGA	GGCCACCCCT	CCTGGTTTGA	GCCAGGCCTA
14851	CCAGGTGCTC	CCAGGCCCCA	AGGCTCAGAC	ACTGCCCTTA	CCAGGAGCTC
14901	TATGTGGAGG	ACTTCGCCAG	CATTGACTGG	CTGGCGCAGA	GGAACAACGT
14951	GGCCCCCGAC	GAGCTGTACA	CGCCGCACAG	CTGGCTGCTC	CGCGTGGTAT
15001	ATGGTGAGCG	CCTCCTGAGG	GGCCGGCAGG	GCAGCCCAGG	GTCAGGGTCA
15051	GGGTGTGCGC	CACCTATTCA	CGCACTCATC	CCCTGCCAGC	GGCACTGGGC
15101	CACCTCCTCT	GTGCCAGGCC	CCAGGGGGCG	GGATCTCATC	GCCCTGCCCC
15151	TCCACCCTGA	GAACCAGCTG	GTCTTCTACT	CTCAGGAGTC	CACCTGTGTC
15201	AAGGGTGTGT	GGTAGGAGGT	GTGGGGCAGC	CCCTCCTGGG	CAGGGAAGGA
15251	GGAGCTCAGA	GACCAGGCCCT	GGGGGTGGGT	GGGAGGGGGA	AACCCCTGGG
15301	AAGGGCAAGT	CCAGGCGTTG	CAGTGATGG	AGCTCCAGGC	TGAGGCCAGT
15351	GTCATGGTGT	CTGACCATCA	CTGACCCCTG	TCCCCTGTAG	CGCTCCTCAA
15401	CCTGTATGAG	CACCACCACA	GTGCCCACCT	GCGGCAGCGG	GCCGTGCAGA
15451	AGCTGTATGA	ACACATTGTG	GCCGACGACC	GATTACCAA	GAGCATCAGC
15501	ATCGGCCCCG	TCAGTGCCCC	TGCCCCGGCT	CTGACTGCAG	CCCCCTGGGG
15551	TTGAGGTCCG	AAAGTGAAGT	CCTAGAGGCC	GGGCTGTGAG	CTGGGAGTGG
15601	GTTTCTCTGG	AGCCTGGTGT	ACCTCCATTT	GGGAGGTGCG	CCTCTGATCG
15651	CACAAGTGTC	TGAGGGCTTC	TGTCCTGGAC	CCCTGCACGC	CCAGCTCAGT
15701	GAAGTTGCCC	CACCACACTC	GACCCCCCGC	TTCCGTCCCC	CACCGGCTCT

FIGURE 3E

15751	TGTCCTCAGT	GTGCCTGGAC	ACTCTCCTAG	AGGCCCTCC	CTGAGATCTT
15801	GCTGGCTAGC	TGGCTAGCTG	GGAGGGGTGC	TTTTTCCTCA	CTTGGTTCCC
15851	TCTCCCCAAA	CAGTTCATCA	TTGCCCATTC	TCCCGTGGGG	TTTAGACATG
15901	CCAGGGTGG	GTGGGAGTAG	CAGGTGCCAC	TCCTGATTCC	TCCTGCCTAG
15951	CTAGGGACTT	GGAGCTCTCA	CCTCTGTGGG	GCCTGCAGGG	GTCCAGGTGT
16001	GGCCAGTTCA	GTGACCTTAG	AGGGTGCAAT	CCCCGGGCTG	TGCTGGTGCG
16051	TGGCCGCCCTC	CTGACAGAGT	CAGCAGGCCC	TGGGCTGTGC	TGCAGCTGCT
16101	GCCGTAGCTG	TGCGCGTAGC	TGCTGCGGTG	TAGTGGGTG	GCTTAGGCAT
16151	TCTCTGGACA	TACCCAGGTG	GCACTGGGCC	ACTGAGTCCC	ACCCTGACAC
16201	TGCATCTCGG	ATTTTCTGGG	CCTCATGCCA	CCTCAGTGGA	TCACAAATCC
16251	TGACTGACCC	TGCAGCGGT	CCCTTGTTTT	TTGCTCAGCA	GTGATGTGGT
16301	TCTTTGTGGG	TTTTTGGTTA	ATCCCATATA	GAGCACATCT	GTACTAAACG
16351	CATTAGAAAC	ATGCTTGCAA	TTGGATCTTG	ACTTGTGAGA	TGCATAAGTA
16401	AAAAGTTGGG	GGCCTCTGGA	ACATTCTGTT	CTGAGGAAGA	AGGGGGGCAA
16451	GTGGTCCCTA	CTGCTACAGT	CCTGTCTTCG	CATCTCTTCC	TGGGCCCTC
16501	AGGCCCTGTC	CTCTGTCCCC	TGTGTTGTCT	CTAAGGCACC	TGGTAGCCCA
16551	TGCCCTCTG	GTTCCTCCTG	GAACCCCTCG	CTTCTCCCTG	GTGGAGTGCT
16601	GCTCCTTCTC	ACAGCCTAAG	GCAGGCTGTG	GCCTTGGCCG	ACACTGCCTC
16651	TGTCTGAGTT	GGGTCTTGGG	GACACAGTTG	TTGCCCATCC	TCGCTCAGGA
16701	AATGCCTGTT	AGAGCAGAAG	GCCCCGTGCC	TGGCCCTGAG	TGATCTGCAC
16751	GGCACTTTAT	GCCTGGGGGC	TGCTGTGGAT	CTGGACGAGA	CCTTGTCCCT
16801	GGAGGCTGCT	GTGGGTCTGG	AGCGGAGCCT	TGACAGGGCT	GTCTCTCCTG
16851	CAGATCTCGA	AAACCATCAA	CATGCTTGTG	CGCTGGTATG	TGGACGGGCC
16901	CGCCTCCACT	GCCTTCCAGG	AGCATGTCTC	CAGAATCCCG	GACTATCTCT
16951	GGTGAGTGTG	GCTGGGATAT	GCTGGCGGGG	CCTCTCACGA	AGACTGGATC
17001	TGAGCCCCAG	CTGCATCCCA	GTGAGGGGGC	CCCCACGGTG	CCATCTGGGA
17051	ATACTGCCAG	GGAATACCTC	CAGGAACCAG	CAGTGTGAGG	GCTTGTGGAA
17101	GCCACTGAGG	GTTGTCTTTG	AATTGGAAGA	TTTGCCACCC	AGTGGAAGTG
17151	TGGGGTGTTC	CCAGAAGGTA	GAGTGAGGAA	GGGGGTGGTA	GGTAGCAGGG
17201	CAGGTTTCAAG	TTGGCATCAG	GAGGCCGTGTG	GACAAGGGGA	GCTTGTGACG
17251	CATGGACTGT	GCCCTGGAGG	TGGGGCCCTT	GTGATGGAGG	GCAGAGAGCC
17301	GTCCCATGGT	GGGAAGCTTC	CGCTGTACAG	GCCTCTTCCT	CTGGTGCCTC
17351	AGCACTGCAC	GAGGGCGGCA	GGGCTGGCAC	AGCCTGGGGT	CGGGGAGCCT
17401	CCCGCTGCCC	CTTGCCCTTG	GTGTGGCCCT	TCTGGGTGAG	TGTGTCCTGT
17451	TTTCCATAGA	GTGTGGCCCT	CACCCCCAGG	AGCCCAGCAG	CCCAGCTGGG
17501	GTGGCATCCA	GGCCAGTGCC	AGGCCTCGGG	AGGGGACAGA	CGGCCTCTCT
17551	GGGACCTTCC	TGAGTGCAGG	GTCTGGGTAG	CAGCTGGGCT	TCCAGCTTTC
17601	TCCTTGCACC	TGACTTGGGC	TTTTTTCTCC	TCACAGGATG	GGCCTTGACG
17651	GCATGAAAT	GCAGGTAAGG	GCTGCGGGAC	TGCGGCTGCA	TGCTTCCTTT
17701	GCAATCATGT	CTCCCCTTTA	TTATTTTCTC	TTTGGGGTTC	AGAAATAACT
17751	CCTCCTGGAC	CAGGTCCCGG	CAGCGTGCGA	CTAGAGGCTG	AGTCAGTTGA
17801	GGCCTCTGGC	CGTGTCCCTG	TGGGTGCTGT	TGGTCTCTGT	GTGGGTGCCC
17851	ACCGTTCTCG	ATGCTGTCTC	GCAGCTGTCC	TGTTTGCTTT	TTGCCCTGAT
17901	GATCTGAGTG	GTCTCAGCTG	TGTAACGACA	GACCCAGAGC	TGCAGAAGCT
17951	CTCATCTTGT	TACTGTGGCA	GGAGGTGGCT	CTGGTTAGTG	GGGGCTTCTC
18001	CTCCATGCAC	TCTTAATTTA	AGGGGCTTCT	TCTTAAAGGT	CCTGGGTGGA
18051	CAGGACAGGA	GCCTGGAGGA	CCGTGGTGGC	GTGTGGCCGG	GCCTGGGAGC
18101	TCCCCGTGGA	CTTGGCCTGA	GTGGGCTGGA	ACCCAGTCAT	GAGGGGCACC
18151	AAGCACAAGG	AGAGGGGAGG	CCGGGTGGAT	CCTGGCTGAC	CCTGGTCCCTG
18201	TCCTGGCTCT	GGGGGCCCTG	TAGACCGCAG	TCCTGTCCGA	CTGGGCTGAG
18251	CCTGCGCCCC	TCTGTGCGTG	TCAGAAGCCC	AGACAGTGTT	GCCCTGTGTC
18301	TTGTGGTCTA	AGGAGGGTTA	CGCCCTGCGG	TGCCGTGCTT	CTGTCCCCCA
18351	CCTGATTTCAG	TGTGGAAATG	TGGAGTCTCC	AGAGGTGTCC	TGGGTGTGAC
18401	ATTTGGGATG	GATACACGTG	GGCCCAGCAC	TGCCCCGCCC	AGGGCTACCC
18451	TTGGTGCCAG	GTGCCCCCAG	CCACGAGCTT	TTACCCAGCT	GGCCTTGAGC
18501	TCCCCAGAGG	CTCCCCGGAC	ACTGTCCGTG	TTTTGTGAAA	AGGTTTTCAA
18551	AACACATGTA	AAGTGGAGGT	GAGTAGCAAG	CCCTAGAGCA	GGCCTGGGCC
18601	TCCCTGCCCC	TCCCTGTCCC	CTCCCTGCCC	CTCCCTGCCC	AGCGCTCCCT
18651	CAGCACCGAC	TCATCAGTGC	ACCTCAAGCT	GATGAGGGCG	TCTGTGTTTT
18701	GACAAAATTG	CTCTGAGGTT	GTCACACCCA	ACAACTTAT	GACGGTTCCT
18751	GAGTGTAGTC	CTCACGTTGT	GGCTGGTGT	TGTGAATCAG	GATTACAGCC
18801	AGGCCTGCAC	AGGCCTTCAG	TTGTTGGTCT	TTGAGCTCCT	GTTAGTCCAG
18851	CCGTCTCTCG	TGGTCTCTTT	TCTCCTCCTG	GAAGGTTTGT	TCCTGAAGGG

FIGURE 3F

18901	CTTCACATTG	CAGATCTGAC	TGGTTGCTTC	TTATGTTCCC	TGAGTTTTTG
18951	TAAACTGGCC	AGGCCCTGAG	GCTCGATCCC	ATTGTGTTTC	TTTGGCGAGA
19001	ATGCTTTTCT	GGTGGTCCCT	GCCTTGTCCT	TCCAGTGCAC	GATGTCTGGA
19051	TGCGCTGACC	ACACACCACC	CCCTGCCCAG	TCCCCATGTC	TGTCTGGTCA
19101	GTGCCCAGCT	CTGTCTCACT	AGGGTTTGGT	CACCGGCCCT	TTGAAC TGAG
19151	ACCAGGCTGT	GTACCTGTGA	GCCCAGCTCG	GGGTGAGATT	TGAGGTGGAG
19201	CCTTCCCAGC	CCTGTGCAGA	ATTCCCATCA	CCTCCAGGTG	TACTCAGAAA
19251	TGGGGATCAT	TGGCCAGGTG	CGGTGGCTCA	CGCCTGTAAT	CCCTACACTT
19301	TGGGAGGCCA	AGGTGGGCGG	ATCACAAAGT	CAGGAGATAG	AGACCATCCT
19351	GGCTAACACG	GTGAAACCCC	GATGCTACTA	AAAAATACAA	AAAAAATTAG
19401	CTGAGTGTGC	TGGCAGGAGC	CTGTAATCCC	AGCTACTCCG	GAGGCTGAGG
19451	CAGGAGAATG	CGGTGAACCC	AGGAGGCGGA	GCTTGCAGCG	AGCTGAGATC
19501	ACGCCACTGC	ACTCCAGCCT	GGGCAACAGA	GCGAGACTTC	ATCTCAAAAA
19551	AAAAAGAAAT	GGGGTCATTT	CCAGGCATCA	CCATGACTGA	GGTGCGCCAC
19601	TGTCATTGGG	TGAGAGCAGC	TGGATGCTCT	ATGTGTAGGT	GCTGGAGCCT
19651	CTGAGGGATC	GTCCAGTCCT	AGAAGTGTCC	TCAGAGGGAC	ACTGTCCTGC
19701	CTGGTGGCCC	ATGAAGAAAG	GGAGGGCTCC	CTGAGTCTCC	CTGACGTGTG
19751	TCTGCCTGCA	GGCTCAGCC	TTCTCTGAGG	CCCCTGTGAG	CCATGAGGGG
19801	TGCCCAGGGC	TCAGAGCCTG	AGGCTGAGCG	TTGGCTGGGT	GGGAGCCCCC
19851	ACACCTGGCC	CTCAGGCGCC	CATTGGATCC	TGGAGGCAGT	GGCTGGGAGT
19901	GGGAGGGGCT	GCATCTGCTG	CTGTAACACC	ATCCTTTGTG	TGTAGGGCAC
19951	CAACGGCTCA	CAGATCTGGG	ACACCGCATT	CGCCATCCAG	GCTCTGCTTG
20001	AGGTTCGTGG	CTCCTTCTCT	TTTCTCAGCC	TCAGCTGACC	TTCTGTGTGA
20051	CGTAAGCCCA	CGCATCCACC	TGAGGGCAGC	ACTGCTGGCC	ACACACTTGC
20101	CACTCCTCGA	TACTTCCAGT	GACCTGGGCT	CTGGCCTCTG	GCTTCAGAGG
20151	GTCGTGCTGT	GGAGGGGGCG	GCCTTGGCCA	GCAGCCTTGG	GTGTTGGGCT
20201	GGGTCGGGGG	CCTTGGGAGG	GCAGGGGCTG	GAGGCTGTGT	GAGAAGGGGA
20251	GTCTGGTGAA	GGCTGTTTTCT	GAGAGTGCAG	GCAGGAGTGG	GA CTCCAGGC
20301	TCTTCTTAGA	ACTGGAAC TG	CTTGGGCCAG	GCACGGTGCC	TCACACCTGT
20351	AATCCCAGCA	CTTTGGGAGG	CCGAGGAGGG	TGGATCACGA	GGTCAGGAGT
20401	TCAAGCCAGC	CCTGGCCAAG	ATGGTGAAAC	CCCCTCTCTA	CTAAAAGTAC
20451	ACAAAAATTA	GCCAAGCGTG	GTGGCGGGCA	CCTGTAATCC	CAGCTACTTG
20501	GGAGGCTGAG	GCAGAGAATT	GCTTGAACCC	GGGAAGTGGA	GGGTGCAGCG
20551	AGCCGAGATT	GTGCCACTGC	ACTCCAGCCT	GGGTGACAGA	GAGAGGCTCC
20601	GTCTCAAAAA	AAAAAAAAAA	AAAAAAGAAC	TGGAAC TGTT	TGTTATGGGC
20651	ATTCTCGAGC	CAGTACTGGA	GAAAAACGAG	AGTGGATTTT	TATGCCGGTG
20701	GGAATGAGGT	AGGTGGGATT	CTGAAGGTGT	TTCTGGAGAG	CCCTGAGGGC
20751	TGGGCCACGC	AAAGGGCCTG	CCTACACAGG	GTGCTGGAGA	CCCTCTGGGC
20801	ATGGATGCTG	GCCAGGCAGG	GGGGTGCTGG	CATCCATAAA	TGGTCTCTTG
20851	CGCCCTTCCA	TCTTCAGTCA	TATCTCATGG	ACTTTTGCTG	TTTTGTCTTT
20901	AAAGGTAAGT	GCAGCAGGAG	ACCCTGGCAC	TCTCTGGAGA	TGTCTGCTGG
20951	TTTGATTCTG	GTCCCCGGTT	GGGGCAGGAT	GTGGCCAGGA	CCATCGGGAA
21001	ACCAGCGCAG	CCATGCTGGC	CGTGCAAGGG	CAGCTGAGCC	TCTCTGTCCT
21051	GCTGTCTCTT	CCAGGCGGGC	GGGCACCACA	GGCCCGAGTT	TTCGTCCTGC
21101	CTGCAGAAGG	CTCATGAGTT	CCTGAGGCTC	TCACAGGTGA	GGCCGGTGCC
21151	TGGGGCTCTG	AGGGGGCTGA	AGAGGGGGAT	CAGGGCTGGG	AGCTCCTGCA
21201	GGCAGAAGTG	CCCACCTCAC	CTCCACCCTG	CCCTATTTCC	TGCACTGGTG
21251	TTTCAGGGTC	ACCCCCACCC	TCCCATCCCC	TCCCTAGCCC	CTGCTCCATC
21301	CACCGGTCCCT	CCTCGGGCTG	GCCTCACCTG	GGGCAGTTCT	CTGAGGCCTG
21351	CAGGGTGTCTG	GGGGTGCTGG	CAGTTTCTGC	GTCTTGCTCA	TGTTGGAGCC
21401	ACTGTGTGCA	AGGGCCAGGC	ACGGGCAGGG	GCTGTGTACC	CTGAGCTGCA
21451	CAGCCTACAC	GGCACCTCCA	TGTCTCTGAA	GCACCTTCTG	CCCATGGAGG
21501	TGACGCCAGC	CTGTGGACTT	GCCCTCCTGA	GACTGTTTGC	AGCAAAAGCC
21551	CCGGTCCCTC	CTGCCAGATC	AGCTGCCCAC	AGACCCTGCC	CGAGCCCATA
21601	GTTTGACCTC	AGTGTCTCTC	ACACGTGCCCT	GCACCCCAGT	CTGCAGCCAC
21651	AGTCATCCCA	TACATGCGCC	CCAACCTCCC	GTGTCTCCCA	CACCTGTGCC
21701	CGGCCACGGC	CTCAGCCAGT	GTCCCTCTGC	CTGGAACCGC	TGCCCCCCAG
21751	CCCCGTCTCC	CTCCCTTACG	CTCTCACTAG	GACATTGTTT	TGCAGGGCTT
21801	CTGGGTCTTC	CTGGCCTCTG	TGTGGCCAAG	GCTGGCACCC	ATCTTGGGCT
21851	CAAGCAGAGG	AGGGGCATTG	TCCTGCTGTG	CCTGGCCCAA	TGGCGGCCCTG
21901	CTCCTGCTCC	TGCCTCTCTG	CCAGGACTTG	CTCTGGGTGA	TGGGGACTTG
21951	GGGAGGCTGA	CTGAACCCTA	CGGCACCTCA	GGCCTCTTCC	CTTCTCACTG
22001	AGGTGAGAGA	GGCAGCCAGA	AGCTGAGGTT	GTTGAGGAGG	CATTGGGGGC

FIGURE 3G

22051	GCCTGGCACA	GAGCACACCC	GCAGAGACCT	GGGCCCCCTC	CCTGCCTTCT
22101	GGCCGGTGGG	GAGATCACAG	GGGAGTCAGG	TGCTGACTCC	CAGTCCCGTC
22151	TGGGCTGGTT	TGAGCCCTCG	CTGGCCAGTC	ACGTTTCCCA	GCAGCTGTGG
22201	GTGGTGTAGT	AAACAGGTGC	AGGCCCTCGC	GCGCCTCGCA	GCACCAGTGG
22251	TGGCTGTGGC	CGGCAGAGTA	AGCTCCCAAG	CACGTTCTGC	CTCTCCAGTC
22301	CTGCCCAGTC	TGTCTCAGCG	ATGTCCCAGA	TGGGGACGTC	CCGTGGTGAC
22351	GTGTTCTCTG	CTTCCACATT	TGCCCTCGAT	GCTGCCCAGG	TCCCAGATAA
22401	CCCTCCCGAC	TACCAGAAAGT	ACTACCGCCA	GATGCGCAAG	GTATGCGGGA
22451	GCCAGCCCCA	TCCCTGTCCC	GTCCCCCAGG	GGAGGCCGCC	CTCAGCAGGG
22501	TGGGTCCCTT	CCTCTGAAGG	GGGGGCTCCT	CCCTGGGGGA	CTCCTCCCTT
22551	GGCGTTTTTG	GGTGTCTTGC	TGTGGTGGAT	GCCTGGCCTA	GGGGCTCATG
22601	CTTCATGTTG	CTGAGCTGCC	TGGCACATGG	AGGCACAGTT	GGCTTGACAA
22651	CACAGCCGTG	CCTCAGAGCA	GTTCCAGTGG	TCACGGCACA	CACAGGCTTC
22701	AGAAGGACAG	CCGAAGTGTA	GCCAGTGTGT	CCGGGGAAGG	CAGAGGAAAG
22751	AAGTAGACCT	CAGAGCCGGT	GTGGGCTGTG	ACCACAGGTG	CAGACTGTGA
22801	AATTAGGCAT	GGACCCAGCT	GCTGCTGCCT	GTTTACAATG	GGGGTGGGGG
22851	GCACCTGGGC	CCCATCCTGT	CCGTCGTGAG	ATCTGCAGGT	GTTGAGGGTG
22901	TGAGCTGCAC	CCCTGAGGGT	CCCTGTGCTG	GAAGCTGGAG	GTCTGTCTGG
22951	ATGTACCCAG	CTTGGGGGCC	TGGCTGCACC	CACACCTTTG	GTGGCTGGGC
23001	CCCTGCCCTG	ACCGGGTGCT	CTGTGGTGGG	GAGGGATGCG	TGCGGCTGTG
23051	GGGAGGTTCT	GAGAACTGGG	GTGTGGACAC	CCCCAGCCTG	GAGTCATGGC
23101	TTGTGCTCTG	CAGGGTGGCT	TCTCCTTCAG	TACGCTGGAC	TGCGGCTGGA
23151	TCGTTTCTGA	CTGCACGGCT	GAGGCCTTGA	AGGCTGTGCT	GCTCCTGCAG
23201	GAGAAGTGTC	CCCATGTAC	CGAGCACATC	CCCAGAGAAC	GGCTCTGCGA
23251	TGCTGTGGCT	GTGGTAAGGC	TGTGGTCCCA	GCAGCCCCGT	CCATACCTCG
23301	TGTCCTGCAG	ATGAGCTGCG	TGCTCACTTC	CACTCCTGTG	GGCTCCAGCC
23351	CAGCACACAG	TCCGGCCAGG	CCGTAGGAGC	TTGTCTTGG	ATGGTGTCTA
23401	TATGTGGAGA	ACTGTGAGCT	CTGGCTGGAC	CCCTAGGGGC	CTTGCTGGGC
23451	TGTGTGCACA	GGGCCCTGCA	CTGCGGAGCT	GGTGTCCAGC	CCAGCCACCG
23501	ATACTTGGGG	GAGCCGGCGT	GGCCCCAAG	GTTTCTCTCT	GGTGGTTTCC
23551	ACTGGGTGTC	TGAAGAGGGA	ATTTGTTGGT	GTTGGTTTTG	GTGCCACATC
23601	CTTTCAGCAC	ATCTGGCTTT	TGTGTGTGTT	TCCCAGTGGA	GACCCTGCCC
23651	TTTTCTGGCA	GCACAGACTT	GGTTTCTAAG	TCATGGGCAC	GTGTGGGGGC
23701	ATGTTCCCTG	GTGGCTGTGC	ATGGAGGCCC	TGACAGATGA	GGTTGCAGCT
23751	GCTGCTTGGG	GCACCCGAGG	GCTTGGTTAA	CGTGGAAATC	AGCTCTCCGC
23801	CCCCTGTTCC	TGCCCATCG	GTTGTCAGCC	CTAGTGTGTC	CTCTAGAGAG
23851	TTCCGCTGTG	CCCTGGGCGC	CTGTGTGTGC	TCAGCACATG	GGCGAGTTCT
23901	AGGGTGCTCT	CTGTGATTTC	AGCTGCTGAA	CATGAGAAAT	CCAGATGGAG
23951	GGTTCGCCAC	CTATGAGACC	AAGCGTGGGG	GGCACTTGCT	GGAGCTGCTG
24001	AACCCCTCGG	AGGTCTTCGG	TGAGTGGTCG	GCCAGCACTG	CGGCGCGCAA
24051	ACCCGGGGCT	GGCTAGCACT	GTGGTACACA	AACCTGGGGG	CCAGCTTTTC
24101	CCCCTTGCCC	GAGGCTGCAA	GGGCCCAGGT	TCACCGGCAG	ATCTGTCTGG
24151	AGCCCTCCCT	CAGCCCAGGC	TGTTCTGCGC	TCCTCCATCC	CCCGGGGTGG
24201	CAGGATCCTT	GTGTTGTGGA	TAGGAGGGCA	TCAGGTGACA	CCTAGGGGAC
24251	AGTGGAGGGT	TCCAGTGAGA	TCCACAGCCT	GGGCTGGTTC	CTGCTCAGTC
24301	CACAGGGCTT	GTGTTCTGTG	GAGGCTGCTG	TGTATCCAGA	GCGCCTGCAG
24351	GGAGGTGTCT	TTGGGGACTG	TGGGGACTGT	GGGGACCCAT	GCCATGGGCA
24401	GTAGGCTGCT	GTGTGTGCAT	GGTTGCCACC	GTAAGGTCT	TGGGGGAGGA
24451	TCTCAGCCCT	GGTCCACCTC	TGGGCACCTC	ACATACCCGC	CTTCTGGTCT
24501	CCCTCCACAT	CACACATGGC	TTTTTGGGGT	GGGGTCGAG	CTTCTGCTG
24551	TGTTCCCTTC	ATCTTCGCTC	TCAGGTAGCA	CAGGTGTGTG	TCCTGGACCA
24601	GCCGGCGTTT	GCTCTGGAGG	TTGGTCAGGG	AGGCAGCGTC	CGGGCCCGGG
24651	CTCACTGCAA	CACCTTTGCT	TGTTGTGGCT	TTGCCTGAGC	TGCAGAGCCT
24701	GGGAGCCAG	GGTGAAACCC	AACACTTGGT	TCTTCCCTCC	CTTTCCTAGG
24751	GGACATCATG	ATTGACTACA	CCTATGTGGA	GTGCACCTCA	GCCGTGATGC
24801	AGGCGCTTAA	GTATTTCCAC	AAGCGTTTCC	CGGAGCACAG	GGCAGCGGAG
24851	ATCCGGTAAG	GAGGGTCTCA	GCCATTCACT	GTGGGCGCTG	CCAAGTCGGG
24901	GGCCAAGACC	CAGACGCATC	ATTCTGTGAC	ACGGCCCTGG	TGGCCCATCT
24951	CAGAAGCGAA	ACTCATGGAA	ACATGCAAGA	GGCTTCGGAT	GTTGTGGAAT
25001	CCAGTCATAT	GCCCTAAAGC	ATACAAAATA	TCTGTTAGGG	GCTCAGAAATA
25051	GCACAGTTAT	GATACAAAAA	TGGATTTTCT	CTCTCTTTTA	ATAATGTTAA
25101	GAAGACATCA	CATACCTGAC	TCCACCGGTG	TCCAGAAAC	GGTTTTTAAG
25151	TAACCTTTCC	TGTTGAAGGG	TAGCAAGTAT	TCAGAAAAGT	GTACAGGTTG

FIGURE 3H

25201	GTCTTCTTGA	AGCAAACAGG	AAGCGAACAG	TGCCAGCATT	AGACATGGTG
25251	ACACCACCAG	AGCCCTCGGC	CCGCCCCATG	ACGGGGCCGC	CCACATGCCT
25301	GCCAGGTCGT	GGGTGTCTGT	TGCTCGCTTT	GGATCTTGTC	TAGGTGGACT
25351	CCTGAGGTGT	GGAATTCGTG	TTGCCTTCTC	CTGCTCTCCT	GCTCTCCTGC
25401	TCGCGGTTAG	TCAGGTGGCT	CGGGTAACAG	CAGCGTTCTC	TCCCTCGGGC
25451	CTTCGGTTGA	ACACAGAATG	CCGCGCTATC	CAGCTGCCTG	TTCTCAGCAC
25501	CTGGGAGGAT	TTCAGTCTGG	GTTATTATGA	AGCATCTACT	GTGAACACTC
25551	TTGTACTTAT	CTTTTGGGGG	CACCTGGGTA	CCCATTTCTC	ATGGTCACGT
25601	ACCTAGGAGT	GGCATTGCTG	TGTTAGAGGG	TACGTTATAG	GGTATGTGAT
25651	TTTTGTAGGT	TCTTCTTTAT	CCTATCACGA	TTACATTTTT	TTACTTTTGT
25701	TCAACCTGGT	TGAGACTCAC	CTTGGTCACA	ATGCACTGTC	CTTTTTATAT
25751	ATTGCTAGAT	TCAATTTGAA	GAATATTTTG	TTAGGATTTT	AGCAACTCTG
25801	GTTACAAGAG	ACGCTGGTCT	ATAATTTTTT	TTTCTTTATA	ATGTTTTTGT
25851	CAGGTTTTTC	TGTTAAGATG	ATGCTGGACT	TAGAAAAGCA	GTTGGAAAAT
25901	GCTTTTAAAA	TACTCTTTGG	AAGAATTTAT	GTAATATTCA	TAATATTTCT
25951	GCCTTAAATG	TTTGGGAAAA	ATTACCGGAA	ATGCCAGTTG	GGCCTGGAGA
26001	TTTCTTTGAG	GAAAGTTTTT	AAATTAGAAG	TTCAATTTCT	TTCTTTCTTT
26051	CTTTCTTTCT	TTTTTTTTTG	AGATGGGTTT	TAGCTCTCTC	ACTCAGGCTG
26101	GAGTGCGGTG	TAATTTCTTT	AATAGTTTAT	AGGACTGAGC	AGATTTTCCA
26151	TTTTTGATAT	AGTCTGGGGA	GTCTTCCCAT	TTCCACTCAG	CTTTACACTG
26201	ATTCATGCAA	AGTTGTTTCA	TGTCCTCTTA	GATGGCTCTG	AGCCCAACGC
26251	TGACATCCCT	CTCTTCCCTT	TGAGAATCTT	ATACTGATCT	TTTGAAAAAA
26301	AAAAAATCTT	AGTCTTTGAT	TCTGTTTTTA	AAGAGACTTT	ATTTTTGGTT
26351	TCATCAATTT	CTATTGTTTG	TTATTTTCTT	TCTTTCTTAA	TTTTTTTGAG
26401	ATGGAGTCTT	GCTCTGTTTG	TGAGGTTGGG	GAGCAGTGCG	GTGATCTCAG
26451	TTCACTGCAA	CCTCCGTTTC	CGGGGTTCAA	GCGATTCTCC	TGCCTCAGCC
26501	TCCCGAGTAG	CTGGGACTAC	AGGTGCTGAC	CACCATGACT	GGCCAATTTT
26551	TTGGTATTTT	TATTAGAGAC	AGGGTTTTAC	CATGTTGTCC	AAGCTGGTCT
26601	TGAACTCCTG	ACCTCAGGTG	ATCCACCTTC	CTTGGCCTCC	CAGAGTGCTG
26651	GGATTACAGG	TGTGAGCCAC	CACACTGGCC	TTTGCTATTT	TCTTCTCCTT
26701	TTATTTTCTT	AACTTGAATA	CTTAGATATT	TGATTTTCAG	GCTTTTATTG
26751	AAATATGAAT	TTGAGGCTAT	AAATGAGTTT	TGAGATATCA	TTCAGTTAAA
26801	TGTGTGTTCT	GGTGCTTGCT	GTGGTAGCAC	AGATACTAAA	AGTGTTTTCT
26851	GTTTCTACTG	TTCTTCTCTG	GCCCATGAGT	TATGTGGGAG	TATGCTGCTT
26901	CATTTACAAT	CTGAGAATGT	TCTGGTGTGG	TTTTTTTGGA	AGCCGTGGAT
26951	GGAGCAGGGG	TTTTCTTG TG	CTTCACAGGT	GCAGCTAGGA	GGGCACTGTG
27001	TCCAGGGTCT	TCTGTGCGCC	TGGCGTGGCC	CTTGGCCATG	TGCTGCTCTG
27051	CGGCATGTAG	TGGGCGTGAG	TTGTCTCAG	CCACATTTAG	AGAATTGGCC
27101	TTTTAAAAAA	TAGATCATCT	TTTAAAAATC	ACTGTAATAA	AAGTAAAGCA
27151	GGTTCTTTGC	AAACAAGACT	TGCAAAATAC	AGAGAAGCGC	AAAGAAGAAG
27201	CTAAGTCGCC	CCTCCTCGCC	CCTGAAGGAG	AATCTGCTGT	TGCTGTTTGG
27251	TCTCCACATT	TCCATGGCGG	CTTGCTGCCC	CTTTCACGCC	TGGCCCACTT
27301	TGTGCCTGGT	GAGGTTTCTA	AAAGCCCCAC	CCTTGAGCGC	GCTCCTCCAG
27351	CACGAGCATG	AATGGCACAG	GTGTTGTGTC	ATTTTACTCA	GTAGCCTCTG
27401	GGTTATTTTT	CAGTTTTTCT	TGTTGTTTTT	TAGCTTTTCC	CCATTTTAAC
27451	CTTAACCTGGT	ATTTTCTTGT	TAAATATTTA	TTCATGACCA	TTATTATTCC
27501	CTAGAGCCAC	ATGGCTTGGG	GTCCACCTGC	CTGGGTCCGC	CCCCATCCCT
27551	GCCCCCTTCTG	GCTGTCTGAC	CTGGCCTGGT	GACTTCTCTT	CTCTGCTCAT
27601	CTCTCTCCCT	GCCTGAGTGG	GCAAGAGTAC	AGCCTCACAG	AGTGGTGGGA
27651	TTGTGTGAGA	TGCCACAGGG	AAGCACATGT	CAGTTGTTGT	CACTGTGTAG
27701	AACAATGAGT	CCCGGATGTG	GCCCGCAGGG	GAGCAATGGT	GACTTAATCG
27751	CGGGCTTCCCT	CTGCATTTCT	TTGGTGACTT	CCAAGCTAGA	ACATTCCTTT
27801	TTTGTTTTATT	TGTTTGAAGC	AGGGTCTCAC	TCTGTTACCT	AGGCTGGAGT
27851	GCAGTAGCAA	AATCATGGCT	CACCACAGTC	TCAAACCTCC	GGGCTCAAGC
27901	AATCCTCCCA	CCTCAGCCTC	CTGAGTAGCT	GGGACTACAG	GTGCATACCA
27951	TCACCTGTGG	CTAATTTTTT	AAATGTTTTG	TATTTTTTAA	ATGTTGCTCA
28001	GGCTGGTCTT	GAACTGCTGG	GCTCAAGCAA	TCCTCCCACC	TCGGCCTCCC
28051	CAAATGCTGG	GATTACAGAG	TGAGCCACCA	CACCCAGCCA	TTTTTAAAAAT
28101	TTTCAACCAGG	AAGTTTTTTC	TTTCATTTTT	AAGCACAGTA	AGTATTTGTG
28151	TATTATGTTA	CAGATATTTT	CCCCTCAATT	TCTTTGTTCT	TTTTATCTCT
28201	TTAGGGAGTA	TGAACATAAG	TTTTTAACTT	TTAAATGGTT	AAATATATTA
28251	GTGTGATTTT	TATATTAAGA	TTTTATTTTT	TTTATTTTTT	TTTTTTTTGA
28301	GACGGAGTCT	CGCTCTGTCT	CCCAGGCTGG	AGTGCAGTGG	CGGGATCTCG

FIGURE 3I



28351	GCTCACTGCA	AGCTCCGCCT	CCCGGGTTCA	CGCCATTCTC	CTGCCTCAGC
28401	CTCCCAAGTA	GCTGGGACTA	CAGGCGCCCG	CCACTACGCC	CGGCTAATTT
28451	TTTGTATTTT	TAGTAGAGAC	GGGGTTTCAC	CGTTTTAGCC	AGGATGGTCT
28501	CGATCTCCTG	ACCTCGTGAT	CCGCCCCCCT	CGGCCCTCCA	AAGTGCTGGG
28551	ATTACAGGCG	TGAGCCACCG	CGCCCCGGCT	ATATTAAAGAT	TTTAAACTTG
28601	CCGGGCGCAG	TGGCTGACGC	CTGTAATCCC	AGCACTTTGG	GAGGCCGAGG
28651	CGGGTGGATC	ACAAGGTCAG	GAGATCGAGA	CCATCCTGGC	TAACACGGTG
28701	AAACCTTGTC	TACTAAAAAT	ACAAAAATTA	GCCGGGCGTG	GTGGCGGGCG
28751	CTTGTAGTCC	CAGCTACTCG	GGAGGCTGAG	GCAGGAGAAT	GGCGTGAACC
28801	CGGGAGGTGG	AGCTTGCAGT	GAGCCGAGAT	GGTGCCACTG	CACTCCAGCC
28851	TAGGCGAGAG	TGCAAGACAC	CGTCTCAAAA	AAAAAAAAAA	GATTTTAAAC
28901	TTACCTGGAG	AGTTTTTGAG	ATACAGTTTG	GAGTTGCAAG	TTACTTTAAC
28951	ACTATTTATA	TGGAATATTC	TATTTTACTA	GACAGACTTA	AATTCTCCCT
29001	TAAATTCACA	AATTTATAGA	AAAGTTACAA	AAATACTGAA	AAGTGCTCCT
29051	GTTTACTCTG	ACTAGAATTC	TTTAGTGGGT	GGCACCTTAC	CCTGAGGGCT
29101	TCATGACCTG	TCCTCCCACA	TGATCCAGGC	TCTACCTTCA	GGGCTTCATG
29151	ACCTGTCCCTC	CCACATGATC	CAGGCTCTAC	CCTCAGGGCT	TCATGACCTG
29201	TCCTCCCACG	TGATCCAGGC	TCTACCTTCA	GGGCTTCATG	ACCTGTCCCTC
29251	CCACATGATC	CAGGCTCTAC	CCTCAGGGCT	TCATGACCTG	TCCTCCCACG
29301	TGATCCAGGC	TCTACCTTCA	GGGCTTCATG	ACCTGTCCCTC	CCACGTGATC
29351	CAGGCTCTAC	CCTCAGGGCT	TCATGACCTG	TCCTCCCACG	TGATCCAGGC
29401	TCTACCTTCA	GGGCTTCATG	ACCCTTCCCTC	CCACATGATC	CAGGCTCTAC
29451	CCTGAGGACT	TCATGACCTG	TCCTCCCACG	TGATCCAGGC	TCTACCTTCA
29501	GGGCTTCATG	ACCTGTCCCTC	CCACATGATC	CAGGCTCTAC	CCTCAGGGCT
29551	TCATTACCTG	TCTTCCCACA	TGATCCAGGC	CCATTCTTTC	TTGAACCAT
29601	GGAAAGGAAT	TTGCAGATAG	GATGTGTACC	CCTAACTGCC	TGAGTATTTC
29651	TTAGCAGGTG	TATTCTTTTG	TGCAAGTGTA	AGTCAGAAATG	TTAATGTTGA
29701	TGAAATACTA	ATCTGCAGGC	CTAATTGTTC	CAATAATGTC	CTTTATGGCA
29751	AAATCTTCCC	CTCAAGCTTT	AATCCAATAT	CATGGGTTGC	ATTTGTTTAT
29801	TTTTAATTAT	TTTTCTTTTC	TTTTCTGTGT	TTCTTACCC	TTCTCACTGT
29851	GCACATGGGT	TGCATTTAGT	TATCACATTG	ACACCTTTT	AACCTGGAAT
29901	AATTCTTTAA	TCTTCCCTTG	TGTTTGATGA	CTTTGTTCAT	TTTGAATTGT
29951	TCCACAAGTT	ATTTTGTAGA	ATATCCTCAG	TGTTTTTTTT	TTTCTGGTGT
30001	CTCGTGATTA	GATTCAGGTT	ATGAAACTAC	ATTTTTGTCA	GGAAGATTGC
30051	AGAAGAAATG	GGGCCTTCTC	CTGCACCTTA	CCAGGAAGCA	CACACCAACT
30101	TTGATCCCTT	GATTAAGGTG	ATGACCGCTG	TACTTAGTTT	CTCCGCTATG
30151	AAGTTGCTTT	TTTTTCTTTT	GTGGGGAGAC	AGTTTTAGAC	TATGTAAACG
30201	TCCTATTTCCT	CATCATACTT	ATACCTGTTA	GTGTTAGCAT	TTGATGATGA
30251	TTCTTGCCCTG	AATCAATTAT	TTGCATAATG	CCTACAAAAT	TATCATTCCT
30301	TCCATATGTA	TTAGTTGGTG	TTCTTCCAAA	AGCTTTTCCT	TTGCCCTCTGT
30351	TTATTTACTT	ATTTATCACT	GTGGACGCAT	AGATTCTTAC	GCAATTGATT
30401	TTGATACTGA	TCTCATAGCT	AGACAATTTT	GCTAAACTTT	TAAAAAAATT
30451	TATGTACTTT	ATCTTTTATA	GCAGCTTTAA	ATTTACAGAA	AATTTGAGTG
30501	GAAGATGCAG	TGTTCCCATG	AAGCCGCTAA	CTCCTCGCAC	CTTCCCTCAA
30551	GTTTCCCCAG	TACTAACATC	TTGCATTCAA	GTGGTGCGTT	TGCAACATTC
30601	ATAAATTAT	ATCGTCCAGA	GTCCATTGTT	TACATTACGC	TTCTCTTCA
30651	TGTTGTTCAT	TCTGTGGTTT	CACAGATGTG	TGATGCATGT	GCCCACCACT
30701	GCAGTGTCC	ACAGGATCTC	ACTGCCCCGG	AGTCCTCTGC	GCTGTCCCCG
30751	CCTCCAGAAC	CCCTTAGTAG	CAAACACTGA	TATTTTACT	GTCTCCATAG
30801	TTTTGCCTTT	TCAGACTGAC	CTATTTCACT	TAGTAAGAAG	CATTTAAGAT
30851	TCCTGAGTCT	CTTCTATGG	CTCAATAGCA	CATTTCTTTT	TAGTGCTGAA
30901	TAATATTCCA	TTGTCTGGAT	GTACCACAGT	TTATTCATTC	ACCTACTAAG
30951	GTGAATGTCT	TGCTTGCTTC	CAAGTTTTTG	CAACTATGAA	TAAAGTTGCT
31001	ATCAATGTGA	GCGTGCACAT	AAGTTTTTCAG	CTCATTTGGG	TAAATGCCAA
31051	GAAGCATGAT	TGCGGGATCC	TATGGTAAGA	GTGTGTTTAG	TTCTGTAAGA
31101	AGCTGCCAAA	CTGTATCTTA	AGTGGCTGCA	CCATTTGCGT	TTCCACCAGC
31151	AATGATGAGC	GTTTTGTTGC	TCCACATCCT	CACCAGCAT	TGCTGTTGTG
31201	TTTTGGGTTT	TACCTTTCT	AAGAGGTGTG	TAGTGGTATC	TCCTTGTTTC
31251	AATTTGCAAT	TCCCTAATGA	CATTATGTGA	AAATCTTGTC	ATATAGTTAT
31301	TTGCCATCTG	TGTATCTTTT	TCAGTGATGT	GTCTTTTAAA	GTCTTTGGCT
31351	CATTTTTTAA	TTAAATTTTC	TTATTGTTGA	GTTTTAGTTC	TTCATATATT
31401	TTGGCTGCCA	GTCCTTTATC	AGATATGTCT	TTCGCAAATA	TTTTCTGCCT
31451	GTGTCTTGTC	TTTTCATTTCT	ATTAACAGTA	TCTTTTGCAG	AGCCAGTTT

FIGURE 3J

31501 CATTTC AAGG AAGTCCAGCT TATCAATGTT CTCTTTCATG TATCATGTTT  
31551 TTGGTGTGT ATCTAAAAAG TTAGTGCCAA GCCCAAGGGT ACCTAGATTT  
31601 TTTCCGTGT TATATTCTAG GATTTTTTAAA GTTTTGCATT TTACATCTAG  
31651 GTCCATGATT CATTTTGAGT TAACTTTTGT GAAGGGTTTA TGGTTTGTGT  
31701 CTAGATTTTT TTTTTTTTGT TTTTTTTTGA TGTGGATGTC CAGTTGTTTT  
31751 GGTACCATCT GTCAAGAAGA CTCTTTTGGT GTCATTTTGT TGCCTTTGTT  
31801 TCTTTGTAAA AAATCAGTTG ACTGCATTG CATGGGTCTA TTTCTGAGCT  
31851 CTCTGTTCCA TTGCATTGAT CTGTTTGTTC TTCTCAGCAA TCCCACACTG  
31901 TCTTGGTTCC TGTAGCTCTG TAGTAGGCCT TGCAGTCAGT TACCGCCCT  
31951 GTTCTCACTT CAGTGTCTC TTCAATAGTG TTTTGACTAT TCTAGGTTTT  
32001 TTCCCTCTCC ATATACATTT TAGAGTCAGT TTGTCAATAG TTTACAAAAT  
32051 AACTTAGCTGA GACTTTGATT GGGATTACAT TGAATCTGTA GCTCAAGTTG  
32101 GAAAGATCTT TTATTTCTTT CATCAGAATT TTGTAGTTTT CATCATATAT  
32151 AGATCTTGTA CATATTTTGT TGTTTATACC TAAGGATTTC ATTTTTTTGG  
32201 TGCTAATGTA AATGGCGTTG TGTTTTAAAT GTCAAAATCT AATTGTTTAT  
32251 TGCTGGTAGG AAAACAACAG ACCCTTTTTT TTTTTTTTAA GGGACGCGT  
32301 CTTACTCTGT TGCCCAGGCA GAGTGCAGTG GTGCCATCAT AGCTCACTGC  
32351 AGCCTCAAAC TCCTGGGCTT AAGGAATCCT CCTGTCTCAG CCTCCTGAGC  
32401 AGCTAGGACC ACAGGCATGT GCCACTACGT TCAGCTAATT TTTCAATTTT  
32451 TTTGTAGAGA TGGGATCTTG CTCTGTTGCC CAGGCTGGTC TCAAACCTCC  
32501 GTCTGCTTTG AGATGATTAT ATATTTGTGT CCTTTGTATA TTTAGAGGAT  
32551 TATTATGGAT TTTTCTAATG TTAAGACACC TTTGTATTTC TGAGATCGAC  
32601 CTTAGTATTG GTCTATATTT AAGACAGTAT TCAGTTTCTC AGTTGTTTTT  
32651 TGTTTTTTGG TTTTTTTTTT TGAGACAGAG TCTCTGTCTC CCAGGCTGGA  
32701 GTCCAGTGGC ACAATCTCAG CTCACGCAA GCTCTGCCTC CCGGATTACG  
32751 GCCATTCTCC TGCCCTCAGC TCCCGAGTAG CTGGGACTAC AGGCGCCTGT  
32801 CATCATGCCC AGCTAATTTT TTGTATTTT AGTAGAGACG GGGTTTCACC  
32851 ATGTTAGCCA GGGTGGTCTC AATCTCCTGA CCTCGTGATC TGCCCACCTC  
32901 GATCTCCCAA AGTGCTGGGA TTACAAGCG TGAGCCACTG CGCCCGCAG  
32951 CAGTTTCTCA GTTTTAATTT GGAGTTTTGC ATCTGTGTTC ATGAGTGAGC  
33001 CTGAAATTTT CACTTTTCCA TATCTTATTT CTCTGGGTTG CTAGAATGAG  
33051 CTAGAGAGTG TTCTCTCTT CTGTTCTCTG GAAGAGTTTG TGTGAGATTA  
33101 GAATGAGTGT GTCTGATAAT TTAGTTGCAT TCATTTATAA AATTCTTAGG  
33151 CCTAGAGTTT TTTTCTGGG AAAAGTTTAC ATTTTGACTC ATTTTTTTAG  
33201 TAGTTTTAGG ACTGTTTAGG TTCTCTATTT CTTGATTGAG CCAGTTTGA  
33251 TAAGTTAATC TTTCTAATTT GTAGATATTT TCTCTAAGTT TGCAAAATGTA  
33301 ATACATAAAA CTTTCTTGTC ATTTCTCACC ATATCTGTAG TTCTATCTTT  
33351 TTATTGCTAA TATTACTAAT TTGTACTTTG ACTATTGTA TTTGTTACCT  
33401 GTTGCCGAGT AACAATATTA GTACAAACCT AGTGGCTTAG AACAACACAC  
33451 ATTGATTACT TCACCGTTTC TGTGTGTGAG AAGTCCAGGC GCGGCCCTCGC  
33501 AGGTCGTCTC CTGCCCTCAG GTCTCTCCGG GCTTCAGTCA GGGTGTTAGC  
33551 CAGGACCGGG GTCTCGCCTG AGCTTCCAGT GAGGAAGGAT CTGCCCTGTA  
33601 GCACACAGGG TCCTCGGCAC GATCCCATTC CTCAGCTGGA AGCTGCCGAC  
33651 TGCCGCTCTG TGCGGGGCCCT CTCTAGATGG CATCTTCACA AAAGCGAGAA  
33701 GGGAGAGTTG CTAGAGGAG TCTGCTAGCA CCATGGGAGT CGCGGTACAC  
33751 CAGACCTCGG TCCCAGGACC CGCACCCATC AACCCTGCCG TGATCTGCTG  
33801 GTTAAAGACA AGTCCCACGT CCCACAGGGT GACACTGGAG TAGACACTTC  
33851 GCTCTGGCCT TTTTCAAGAA CTGGTTATTT TTTGGAAATA TCAGTTAGAT  
33901 GTAGGATGGG TCTTGTCTTC TAAATCTATT GTTTTCTCTC TAATTGATTT  
33951 TTTCTGTGTT TTATTTAGTT CACTTTGTTG GGTTTGCTCA AGCCTGGGTC  
34001 ACTGGATCTC AGGATGCTG CTCCTGTTTG CAGCTGTGTC TGCAGGGGCT  
34051 TCCCAAGGCC TTGCTTTCCC CTCACGTCCC TTTCTCAGAC TCTGCCAATC  
34101 CGCTTCCCGC TCTGGTGTCC TGTGGTTGCT TCTTTTTTAA ACCCTCATCG  
34151 GTCTGTGTAA ACTGTTTATT TTTATGTGGT TTTTAAGGGA GACCATTCTC  
34201 ATTCTTTTGA GACCTGGAA AGGATGGAAT TGGGATAGGT AAACCTGCTGT  
34251 TTTACCAGAA TGTTCACTGG ACCAATCTCG TGTTCCAGGG AGACCTCAC  
34301 GCAGGGCTTA GAGTTCTGTC GCGGCAGCA GAGGGCCGAT GGCTCCTGGG  
34351 AAGGGTGAGT AGGCTCCAC TCGTGAGTGC AGAGATGCAT GGGATCCAGA  
34401 GGTTTCTGCT CTCACACACT GCGTTCATAA ATGTTGGCTT GTATGTTGTT  
34451 GCTACACCAG AAGTTTCTGG AAGTGAGCTG CCAGCCCGTG ACTTCTGGGG  
34501 GACCTCGTTC CTTTGTGGCA TGCGTGGCCT TTGCCCCGGT GGAAATTGCT  
34551 CAGTACGTTG CTGGGCGCAG CCGGGCTGCT GGGAGCGCGC TGTAGCCTGA  
34601 GCGTGGCTAT TCCCTCCACC CTTTCTGCTT GCTCTTAGGG TCCAGCAGAC

FIGURE 3K

34651	AGAGCTGCTG	TCTTCCACGG	CCTTAATGCC	TGAGGCACTG	GAGTTGGTGG
34701	GCTGGCTGGG	GCACGTGTGA	TTGTTGCAGA	ATGCGTGTG	TTTCACACAC
34751	CGGCTGTGAA	CAGGGTGGAA	GGGCTGAGGC	TCTCCCTGTT	TCCCTCCAGC
34801	TCCTGGGGAG	TTTGCTTCAC	CTACGGCACC	TGGTTTGGCC	TGGAGGCCTT
34851	CGCCTGTATG	GGCAGACCT	ACCGAGATGG	GTGAGTGAGT	GCCTGTCCTC
34901	TGGTGGGTGG	GGGTTCCTCA	CCCAATGCTC	TGTCATGAGT	GTTTTTTGCT
34951	TTGACATTTG	GTTTTAGGGT	TTGTTTGT	GTTTGT	TTTTGAGACG
35001	GAGTCTCGCT	CTGTCAACCG	GGCTGACATG	CAGTGGCATG	ATCCTAGCTC
35051	ACTGCAGTCT	CAAACCTCGT	GGCTCAAGCG	ATCCTCCCGA	GTAGCTGGGA
35101	TCACAGGTGC	ACGCCACCAC	CCCGGGCTAA	TCTTTTAAAA	CTTTTATGTA
35151	GAGATGGAGT	CTTGCTGTGT	TGCTCACACT	GGTTTGGGCT	CAAGCAGTCT
35201	TCCTACCTCG	GCCTTCCAAA	GTGCTGGGGT	TACAGGCATG	AGCCAATGTG
35251	CCTGGCCTCG	TTTTAATATT	TTTAAACAGT	GAGATAAGAT	CCCCGGTTGA
35301	AATGAAGATG	TTTCCCTGGT	CCCACAGCTC	TCTGGAGCTT	CCTGACATGT
35351	ATGCTGGAGG	GACGCTTCTG	GTCTCCGGCC	CCTCCAGGCA	TACAGATGCC
35401	TCCCAACCCCT	GAGTAGGAAG	ATTAGGGTCC	ACGGCCTCGC	TGGAGCGGGT
35451	TAGAAGGCAG	GAGATCTCCG	GTCCCAGCCG	TGCTCTCCAGC	CGCCGGACTC
35501	TCTCCCAGCC	CTGCTCCAG	CTGCCCCACT	GTCTCCCAGA	GTCTGCCGTG
35551	TGGATGTTTA	GAGGTGGGA	GCACCGTGCT	TGGCTGAGTG	CAGCTTGTTGA
35601	GACGCTGCTC	CCAAGCACTG	CAGACCTCAC	TCAGCCTGAC	GCGTCCGTGA
35651	GGCCATCCTC	GGTACTCGCA	TGTCCCTTTG	TCTTCCCAGC	GACTCTGGGA
35701	GGCAGGAGTA	TCTGTTCCCA	GTTACATCT	GCAAAAGTCA	AGCTCGGGTT
35751	TCAGTAGTGG	CCCATGGCCC	TTAGGTAGGG	TGGCCCCATC	GTGCAGGCTC
35801	CTCCCCGTAC	CCCAAGGCAG	CCTGCTGGGG	TGAGAAGCCA	GGGGTCTGGG
35851	ACCTTCCCTG	GTGTGATGGT	GTCTCCTGTG	TCTGGTCTTT	GCAGGACTGC
35901	CTGTGCAGAG	GTCTCCCGGG	CCTGTGACTT	CCTGCTGTCC	CGGCAGATGG
35951	CAGACGGAGG	CTGGGGGGAG	GACTTTGAGT	CCTGCGAGGA	GCGGCGTTAT
36001	TTGCAGAGTG	CCCAGTCCCA	GATCCATAAC	ACATGCTGGG	CCATGATGGG
36051	GCTGATGGCC	GTTCCGGTGGG	GACGACGGGA	CCGTCCCTGA	GCCTTGGGTT
36101	TGGGTAGAGG	AGGGACACTC	AGCTGTGAGC	CGGTGGCCTG	GGCTGAGTGA
36151	ATGTAGAGAG	GAGGGGAGGC	CTGTGGGCCA	GGTCAGCTGC	CACTCTGGGA
36201	ACAGACACCT	ACAAGAGCCA	CATGCCCTGGT	TCCTGGGGCA	AGAACGTGGG
36251	CTGCTCTGAC	CAAGTGGGGC	CCTGCAGAGA	GGCTCGCCTC	TTAGAAGTGA
36301	ACCACCCACC	ATTAGCCATG	TCAGTGGAAG	AGCAAGCACA	TCAGGGACCC
36351	ATGGAAACAG	CGAGGTGGGC	TGCGATGAGG	ATGCTGCTTC	CTGGTGTGGT
36401	AGTGATGACG	GTCACAGCAG	CTGCTCTCTG	TGGCCCTACT	GTGTTACAG
36451	CTGGTGTGTA	GCCACATATG	TGCCAGGTGC	ACACACACGC	AGACGCATGC
36501	AGGCAGGCAT	CAGTGTACAC	ACTGATGTGC	ACACACAGAT	GTACATGGAG
36551	ACAGATGCAC	ACACAGGCCT	ATGCACACAC	GTACGCATGC	CCACACAGGC
36601	ACCTGTGTCC	ACACACATAC	AGATGCACCC	ACAGCATCCC	ATCTGTGCCA
36651	CACACTGACA	TAGGTACATG	GAGACAGATG	CACACACAGG	TCTGTGCACA
36701	CACGTATGCA	TGCACAGGCA	CCTGTGTACA	CACACGTACA	GATGCACCCA
36751	CAGGATCCCA	TCTGTGCCAC	ACACAGACGT	AGGTACATGG	AGACAGATGC
36801	ACACACAGGT	CTGTGCACAC	ACATACATAC	GCATGCACAG	GCACCTGTGT
36851	ACACACATGC	AGATACACCC	ACAGCATCCC	ATCTGTGCCA	CACACAGACA
36901	TAGGTACATG	GAGACAGATG	CACACACAGG	TCTATGCACA	CACATACGCA
36951	TGCACAGGCA	CCTGTGTACA	CACACGTACA	GATGCACCCA	CAGGATCCCA
37001	TCTGTGCCAC	ACACAGACGT	AGGTACATGG	AGACAGATGC	ACACACAGGT
37051	CTGTGCACAC	ACATACATAC	GCATGCACAG	GCACCTGTGT	ACACACACGC
37101	AGATACACCC	ACAGCATACC	ATCTGTGACA	CACACAGACG	TAGGTACATG
37151	GAGACACATG	CACACACATG	TCTGTGCACA	CACATACATA	CGCATGCACA
37201	GGCACGTGTG	TACACACATG	CAGATACACC	CACAGCATGC	CATCTGTGAC
37251	ACACACAGAC	GTAGGTACAT	GGAGACACAT	GCACACACAG	GTCTGTGCAC
37301	ACACATACGC	ATGCACAGGC	ACCTATGTAC	ACACATGCAG	ATACACCCAC
37351	AGCATCCCAT	CTGTGCCACA	CACAGACATA	GGTACATGAA	GACAGATGCA
37401	CACACAGGTC	TATGCACACA	CGTATGCATG	CACAGGCACC	TGTGTACACA
37451	CATGCAGATG	CACCCACAGT	ATCCCATCTG	TGCCACACAC	AGACATACGT
37501	ACATGGAGAC	AGATGCACAT	ACAGGTCTAT	GCACACATGT	ACACATGCAC
37551	AGGCACCTGT	GTACACACAT	GCAGATGCAC	CCGCAGTATC	CCATCTGTGC
37601	CATACACAGA	CATACGTACA	TGGAGACAGA	TGCACATACA	GGTCTATGCA
37651	CACATGTACA	CATGCACAGG	CACCTGTGCA	CACATATGCA	GATGCACCCG
37701	CAGTATCCCA	TCTGTGCCAC	ACACAGACAT	ACGTACATGG	AGACAGATGT
37751	ACACACAGGT	CTATGCACAC	ATGTACACAT	GCACAGGCAC	CTGTGTACAC

FIGURE 3L

37801	ACATGCAGAT	GCACCCGCAG	TATCCCATCT	GTGCCACACA	CAGACATACG
37851	TACATGGAGA	CAGATGCACA	CACAGGTCTA	TGCACACATG	TACACATGCA
37901	CAGGCACCTG	TGCACACATA	TGCAGATGCA	CCCGCAGTAT	CGCATCTGTG
37951	CCACACAGAC	ATACGTACAT	GGAGACAGAT	GTACATACAG	GTCTATGCAC
38001	ACATGTACAG	ATGCACAGGC	ACCTGTGCAC	ACATACATAC	AGATGCACCC
38051	GCAACATCCC	GTCTGTGCTG	CCCTATTAGG	TTTGTGGCCA	TTTGGGGAAT
38101	CTTCCTAAAA	CCCTAAAAGC	TAGGGCAGGT	CTGCTTGAGC	AGGAGCAGCA
38151	GGGTCTGGGG	GACCCCTGAG	GGCAGGACAG	TCAGGGACCC	ACAGTTGAGC
38201	TGGGCCCCGT	GAGCCCTGGA	TCCTTCTTGG	TGTCTTATCC	TGGCCAGCAA
38251	GCAAGTGTGA	GCTCCTGTGG	GTCTCCAGAG	GCCCATGAGG	ACCAGTGGGC
38301	CAGTTGGGAA	CAAGCCTTGG	CGTCCCTCTC	AGGGGGGAAC	ACCAGGGCAG
38351	GCCTGAGGAG	GCCTGTGTCC	CCAGCCTGTC	ATTGCTGTGG	CTCCGCTTCT
38401	CAGGGAGCCT	AGGAAGAAGG	TGTGGCAAGA	GCCCGAGGCG	CTGGCTGCAC
38451	CTGGCGGGGC	CTGTGGGCGT	CAGTTTAGAC	CCATCCATTC	TCACTGCAGC
38501	ATTCCAGGGT	TTGCCCTTAT	GCTCGGCTGT	GTGAGGGTGA	GGATGATGCT
38551	GTGGGGGCAT	GCATGCTGGG	TGTGTTTCAG	CCTTCTCTTC	CACCAGGCAT
38601	CCTGACATCG	AGGCCCAGGA	GAGAGGAGTC	CGGTGTCTAC	TTGAGAAAAC
38651	GCTCCCCAAT	GGCGACTGGC	CGCAGGTATG	CCGCCAGGGA	CCTGAGCGCA
38701	CAAGGCCCAG	CACTGACCTC	CAGCGTGCAT	GGCTGTTTCC	ACGTCCCCCT
38751	GCTCTGTGTC	CTTTTTGGGG	TACTTTGGAC	ACTTGGGAGG	CGTCACCTCT
38801	GCCAGTGAAT	GCCACAGTTG	GTGGCAGGTC	TGTGGCAGGT	GGTCGGGTCC
38851	TAAAGTCCAG	ATCTTGCTGT	TGTTTCAAGT	GATGCTCTGG	GTGGGGGAGG
38901	AGCTGGATGG	GAGAAGCCAG	TGGGCGGGAA	GCCTTTTTCG	TGCAGGACAG
38951	ACCTTCCCAC	TCCAGATGAC	CTAGTGGCCC	CTCACTGAGC	CAGAAGTCCC
39001	TGTGGTGTGG	GTGTCATGAG	GTCATGTGAG	GCCAACCGCC	CTCCCCTGGG
39051	ATGAGGCTGA	GTTGGTGGAA	GCTGATGTGG	TTGTGAGGGG	CTGGTGACCC
39101	TGGCTTAGGG	TTTGCTGCAG	GGCGGGGAGT	CTGAGCTGGG	CTGATGGTGC
39151	CATGACTGAT	GCGGGATGGA	CTACTTGCTT	TCCTATGCTC	TTGCTTAATT
39201	AGCCCTTTTC	AGGCTGACTC	ACCCACAAGC	CAGCCAAGCC	AACAGCCAGG
39251	GCTCCAGTTC	AGGGACTAGC	CCTCAGCTGA	CTGGTGAAGC	CTTTGTGTTT
39301	ATTTCTCTGT	GTTCTTTTAG	GAAAACATTG	CTGGGGTCTT	CAACAAGTCC
39351	TGTGCCACTC	TTTACACGAG	CTACAGGAAC	ATCTTCCCCA	TCTGGGGCCT
39401	CGGCCGCTTC	TCCCAGCTGT	ACCCTGAGAG	AGCCCTTGCT	GGCCACCCCT
39451	GAGAACATGC	CTACCTGCTG	GGTGCCGTCT	GTGCGTTCCA	GTGAGGCCAA
39501	GGGGTCCCTG	CCGGGTGGGG	GAGCCCTCCC	ATAACCTGT	CTTGGGCTCC
39551	AACCCCTCAA	CCTCTATCTC	ATAGATGTGA	ATCTGGGGGC	CAGGCTGGAG
39601	GCAGGGATGG	GGACAGGGTG	GGTGGCTTAG	ACTCTTGATT	TTTACTGTAG
39651	GTTCAATTTCT	GAAAGTAGCT	TGTCGGGCTT	GGGTGAGGAA	GGGGGCACAG
39701	GAGCCGTGAC	CCCTGAGGAG	GCACAGCGCC	TTCTGCCACC	TCTGGGCACG
39751	GCCTCAAGGT	AGTGAGGCTA	GGAGGTTTTT	TCTGACCAAT	AGCTGAGTTC
39801	TTGGGAGAGG	AGCAGCTGTG	CCTGTGTGAT	TCCTTAGTGT	CGAGTGGGCT
39851	CTGGGCTGGG	GTCGGCCCTG	GGCAGGCTTC	TCCTGCACCT	TTTGTCTGCT
39901	GGGCTGAGGG	ACACGAGGGC	AACCCTGTGA	CAATGGCAGG	TAGTGTGCAT
39951	CCGTGAATAG	CCCAGTGCGG	GGGTTGCTCA	TGGAGCATCC	TGAGGCCGTG
40001	CAGCAGGGAG	CCCCATGCCC	CTGGGTCGTG	AGCTTGCCCT	CGTATGGGGT
40051	GGTGTCAATG	AGCCTCATGC	CCCTGGGTCG	TGAGCTCGCC	TGAGTATGGG
40101	GTGGTGTGAT	GGAGCCGCAT	ACCCCTGGGT	TGTGAGCTCG	CCTGCATATG
40151	CAGGGTCTGT	CATGGAACAT	CCCAAGTCTG	TGCAGCAGGG	GAGCCCATG
40201	CCCCTGGGAC	ATGAACCCAC	CTGCGTGGAA	TGCTGTTTGT	GAGGTGTCTA
40251	CAGGGTTTAT	AGTAGTCTTG	TGGACACAGA	AATGCACAGG	GGACACTTAC
40301	GGACACAGAA	ATGCACAGGG	GAGGCCGAGC	ATAACCAGGG	GTGAGGGGCA
40351	GGCAGCAGTT	GTAGTTACTG	CCGCGGGGCA	CTGCTATGTG	CAGGGACAGC
40401	CAGCGCCCAG	CCCATCACCA	CTCCCTGGGC	TGGCTGGCAG	GTATGGCACC
40451	CTGGGAGCCC	GGCATATACC	CAGGGCACCC	CTACGGCTGC	CGCCAGTCTC
40501	ATGCCCAGGT	GGGTGCTCTG	GGCTGGAGCG	AGGGCCAGGT	TTTGGGCCGA
40551	GGCTTCCCCA	GGCAATCCTG	TGAGCTCCCT	TCTAGCCTCT	GACCCAGTCT
40601	GGTCTGGCTT	GCATGGATGT	AGGGCTTGGG	GTGGGAAGTT	CAGGTCCCTG
40651	CTTTGCCCTT	GCCTGATGTG	GATGAGCAGC	TCACATGCTC	AGGGCCACCT
40701	GAGACTGTCA	CTGCTCTCCC	CTGGCTACTG	GGAGGAGTCA	CTGAGAGCTT
40751	CGTTACCCCT	GCTGCCTTGC	CCAGGGCACA	CCCTATACCT	CCTCATCTGC
40801	TCTTCCCCCT	CCTGCCGCTT	TCTGGGCAGG	TAGCAGTCCC	TGGCCTCTCC
40851	CCCTGGCTGA	TCACTCTCCC	TCAGGCAGTG	GAGATCTGCG	TCTGGACACC
40901	CTCAGATCCT	GTCATTGCCT	GCCCAGAGTC	CTTCAGGGGC	ACCCCTCTGC

FIGURE 3M

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40951 CTTGGTGTGC GGTCCAGGGC TCTCACCCAG GTGCCGCACC CTCTGGGGTC
41001 TTCTGTCCAG CTCCCTTGCC CCATGTGCTG TCACTGACTC TCCTTGGGAC
41051 TCGCCTGCCT GCTCAGAGCC CTGCAGGGCT TGGTCAGCTG CCTGTTTCAGT
41101 GTCAACACTT CCCTGCACAT CTTAAACTG GGCTTTATTT TCGCTGAAGG
41151 AACTGTGTTG GGACCTTGA CATCTGTCAG GTTTGCACAT GCTGTTTTTT
41201 TTTCTCAGCC CACGTGTTCT CCCCCACGTG GGGTAGCAGC AGGACAGACA
41251 GTGAATCACA GAGTCTGCCC TGAGCAGAGG CTGCTGTCCC TGGGACTCCT
41301 AGCCATGGTC AGACTGTACA AAACGGTTTT CCAGAAATGA AATGTAAATC
41351 CATTTTTATA CTGAAAATGT TACTGAAAGT CACTTTTATG AGCATCTGCC
41401 TTAATAAACA GACATTGATT CCCTTATCAG AAGCCTGTCA CACTGTGTTT
41451 CGTTTCATCC TGGGGAGAAC TGCAGATTG GGGTTTCTGG CTGTCATACG
41501 TCACCTGCCCT TGGGGGCGAG TGGGAGGCC AGCCTGGTTT AGGGAACAAG
41551 AGTGACGTGA GGAGTAGCAG GGTGCGTCTC CAGTTACCTG AGGGAAAACA
41601 GATATTTTAA GAGATAATAG CATAGCCTAT TTTAATATGT TTTAAAGGCC
41651 ATAAGCATAT CCAGGAAGAT AAATAAACGT GATACAATGT CCACATAGGA
41701 GGAACCTTCT TTTACTGCAT TGTTTTCCCT CACAGTGGCC TTCAAGTCAC
41751 AGGACGCAGC GATTCCCTGC CCTCTTCGGT GTTATTACAC AGGCAGGACT
41801 TCAGTGTCTG TATCCCTGCC TTCAGTCTTC TTTAGAAATC ACATCTGTGT
41851 TCAATCCATT GTTTAGAGGG AGTGTATTTT TCCTGTTCCA CGAAGAGGAC
41901 TTTTTGTTCA CAATTGGATC ACAATGCAGA GGAGTCTGTT CCTCCCCCGT
41951 CGGCTTCTCG GTGCTGGGAG GGTGACCTGT CCCAGATGAC TCATCACCTT
42001 GACATGCTCT TGACAAAGGA CACCACCAAG AGGAGATGGC AGCTGTACCG
42051 GTGCAGCCTC TGTCTGAGGG GGATATTTGC CTCAGTGTGA TTAAAAATCA
42101 GTCATGAAAG ATTTTGAAT TCAGATTATT TTTATCAGGA ACAGATTTTG
42151 AACATCCTGA AATCTTTTCC CTGGCATCAT ATTAGGTTT CTTTGTTCAC
42201 TATGATGTAA AGTTTCAGAC TCTTGATATT TTTAATATCA ACATAGACGG
42251 TAGGACAAGG AACGGTACCA GAAATGAGTA AAGAGACAAT AATGATAAGA
42301 TCGATTTTATC AAGACATAAC AACCCTAAAT GTATATGCAC TAAATAACAG
42351 CTTCAAAATA CATGAAGCAA AATGGCAGAA TTGAAGAGAA TGAGATAAAA
42401 ACAGAAATTT AACGGGTGCT TTCCGTACTT TGTAACGTAC AGACATGAGA

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(SEQ ID NO:3)

#### FEATURES:

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Start:      2034
Exon:       2034-2047
Intron:     2048-2179
Exon:       2180-2345
Intron:     2346-3088
Exon:       3089-3227
Intron:     3228-8043
Exon:       8044-8119
Intron:     8120-8806
Exon:       8807-8928
Intron:     8929-11095
Exon:       11096-11192
Intron:     11193-14163
Exon:       14164-14299
Intron:     14300-14894
Exon:       14895-15003
Intron:     15004-15390
Exon:       15391-15509
Intron:     15510-16853
Exon:       16854-16951
Intron:     16952-17636
Exon:       17637-17664
Intron:     17665-19945
Exon:       19946-20002
Intron:     20003-21064
Exon:       21065-21136
Intron:     21137-22389
Exon:       22390-22440
Intron:     22441-23113
Exon:       23114-23263
Intron:     23264-23922

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FIGURE 3N

Exon: 23923-24019  
 Intron: 24020-24749  
 Exon: 24750-24855  
 Intron: 24856-34288  
 Exon: 34289-34354  
 Intron: 34355-34799  
 Exon: 34800-34880  
 Intron: 34881-35894  
 Exon: 35895-36065  
 Intron: 36066-38596  
 Exon: 38597-38675  
 Intron: 38676-39320  
 Exon: 39321-39449  
 Stop: 39450

**CHROMOSOME MAP POSITION:**  
Chromosome # 21

**ALLELIC VARIANTS (SNPs):**

DNA				Protein		
Position	Major	Minor	Domain	Position	Major	Minor
478	-	A	Beyond ORF (5')			
891	C	G	Beyond ORF (5')			
948	-	C	Beyond ORF (5')			
3311	A	T	Intron			
3616	T	C	Intron			
3910	G	A	Intron			
6028	G	A	Intron			
8299	G	A	Intron			
8373	C	G	Intron			
8424	A	G	Intron			
8680	A	G	Intron			
8700	C	G	Intron			
8996	A	C	Intron			
10590	T	C	Intron			
11090	G	C	Intron			
11710	G	A	Intron			
12591	G	A	Intron			
13431	-	T	Intron			
14746	C	G	Intron			
14975	G	C	Exon	277	P	P
16031	C	T	Intron			
16891	-	T	Exon	339		V
19359	C	T	Intron			
19405	A	G	Intron			
19653	G	A	Intron			
19742	T	C	Intron			
20054	A	G	Intron			
20627	-	A G	Intron			
21337	T	C	Intron			
21894	C	T	Intron			
23360	G	T	Intron			
26758	A	C	Intron			
27033	T	C	Intron			
27332	C	A	Intron			
27538	C	A	Intron			
27625	G	C	Intron			
27736	A	G	Intron			
30688	T	C	Intron			
31172	C	T	Intron			
31433	C	T	Intron			

**FIGURE 30**

32660	G	T	Intron			
32981	A	C	Intron			
33557	T	C	Intron			
33652	G	A	Intron			
34390	T	C	Intron			
34399	G	C	Intron			
34989	G	-	Intron			
35067	C	G	Intron			
35495	G	A	Intron			
36001	T	G	Exon	631	L	V
38948	C	T	Intron			
39160	T	C	Intron			
40405	G	A	Beyond ORF (3')			
40794	C	T	Beyond ORF (3')			
40961	A	G	Beyond ORF (3')			
41891	C	T	Beyond ORF (3')			

Context:

DNA

Position

478 AGGTTTCAGTGTGAGATTCCATCCAGGCTGAAGCCCCCTTATCCCTATTCTTCATGTTTCTA  
CATGGAGGAACCTTACCTGGAGAAAACTTCCAGCCTCTTTCTGCTTCCAGAGAAGTAGAG  
TGACTCATTGATGAATTTAGAGAACAGATAGGGTGGAGTGTGCTCAGGCTCCTCTGG  
GTACTCTTTCTGGGGTCTGTGGGTGACTGGAGGGGTGTCTTCTGGTGGGCACTCAATTG  
CATAGTGCTTGGTGAGGCAGTTTCATGGCCTAGAGGCTGGGGGATATGTTTGTCTGACTT  
[-,A]  
CGGGTGATTTAGTAGCTTGCCCTCTTGCTTGCAGATTTAAGCCTTGTCTTCAAGCTAGG  
TTTTTAATTTGTGGCAAAGCTGATATTTGATACCCACCCATCTTATGCTGTGTCTTTT  
TCATCCGTTTCTGAACTGGGATAGGAAGAGGTGATTATCCTTGATTGTCTAAAACCCCGC  
TATTCACCTGTGGGAAGGTGCCTGTGGGTATTCTTTTGTCCACTCTCTCTTCCAACCTT  
CTCCTCCGGCTTGTGTGGCTCACCGCCCCCTCGAAGTTAGGCTGGGGGTAGGAATTGAG

891 TGTCTTTTTCATCCGTTTCTGAAC TGGGATAGGAAGAGGTGATTATCCTTGATTGTCTAA  
AACCCCGCTATTCCACTGTGGGGAAGGTGCCTGTGGGTATTCTTTTGTCCACTCTCTCTT  
CCAAC TTTCTCCTCCGCTTGCTGTGGCTCACCGCCCCCTCGAAGTTAGGCTGGGGGTAG  
GAATTGAGGAGTGGGTGCCGAAATGCTCACTAGGCTGGGGCAGTTGTAAC TGGATGTCAG  
GGCTTCTGTGGGCCAGGTGAAGACATGCTGGGGTCTTCTGTGGGTCTTGACCTGACTTA  
[C,G]  
GGACCACTGGCTGCAGCCTCCAGACGTCAGCCATGTTTCCAACAGTCAGACGCCCCCTGC  
CCTGTGTGCGCCCGGCTGTCCCTTCCAAGTTCGGTCACTCGCTCTGCCCTCCATCTTCCTCT  
TCCCTCTGCTGCTAAGGCTTTTACCTTTAATTTCTCCTGGGGCCACCCCAACTCCAGC  
GACCCCGTGAGCAGCTGAGGCTCTACCGCGCTCGGTCTGGCCAGCGACGCAGCCCTTCC  
CTGGCGGGGCTCCAGGGCTTCTGGCCCCGTGGTCCGCCAGGTGTGGGGGCCACGGCT

948 TAAACCCCGCTATTCCACTGTGGGGAAGGTGCCTGTGGGTATTCTTTTGTCCACTCTCT  
CTTCCAAC TTTCTCCTCCGCTTGCTGTGGCTCACCGCCCCCTCGAAGTTAGGCTGGGGG  
TAGGAATTGAGGAGTGGGTGCCGAAATGCTCACTAGGCTGGGGCAGTTGTAAC TGGATGT  
CAGGGCTTCTGTGGGCCAGGTGAAGACATGCTGGGGTCTTCTGTGGGTCTTGACCTGAC  
TTAGGGACCACTGGCTGCAGCCTCCAGACGTCAGCCATGTTTCCAACAGTCAGACGCCCC  
[-,C]  
TGCCCTGTTGCGCCCGGCTGTCCCTTCCAAGTTCGGTCACTCGCTCTGCCTCCATCTTCC  
TCTTCCCTCTGCTGCTAAGGCTTTTACCTTTAATTTCTCCTGGGGCCACCCCAACTCC  
AGCGACCCCGTGAGCAGCTGAGGCTCTACCGCGCTCGGTCTGGCCAGCGACGCAGCCCT  
TCCCTGGCGGGGCTCCAGGGCTTCTGGCCCCGTGGTCCGCCAGGTGTGGGGGCCACGG  
CCTCACCGCGCTACCCCACTCCCCCGGCGAAGCTACGCGGCGCTCAGCTTCCAGGGA

3311 TGTATGTGAAGAGGGTTCCCTCTGGCCGGGCAACAGTCCCGTCAGCTATCTCTTTTTTTTTT  
TTTTTCGATCTCTTTGCAGAAGAATTACTTTAAGGACTTGCCCAAAGCCCACACCGCCTTT  
GAGGGGGCTCTGAACGGGATGACATTTTACGTGGGGCTGCAGGCTGAGGATGGGCAC TGG  
ACGGGTGATTATGGTGGCCCACTTTTCTCCTGCCAGGTAGGAGTATGCTGCCCCAGCCT  
GATGGTATGGCCACCTTGGATCACCTTGGGATCCTGGCCCAGCCTGGTCTAGGGTTTTG  
[A,T]

FIGURE 3P

TGAAGCAGGTGAAAATCCAGGGGCTCACAAGAAAAGGGCTGGCAAACCTCTGCCCTATGTC  
AGAGTCGTCTGCTATTGGTCTAGGGGATCAGCTAGCCTTGCCAGTGTAGGGTGACAGGC  
TCTCTGATAAGAGAAGCAAGTGGTTCTCTAGGGCTCTGTGTTGCCTTGAGGGAGGAGGAA  
GGTGGGCTTTGAAGTCTCAGTACAGGATGGGATGGACATTCCAGGTGGAAGGCCAGCCT  
ATGCCAAGGGGCTGTAGGTGGGCAGAGTGGTGGGTGGGGAGCTGATATCTGCTGTGAAC

3616 GCAGGTGAAAATCCAGGGGCTCACAAGAAAAGGGCTGGCAAACCTCTGCCCTATGTCAGAG  
TCGTCTGCTATTGGTCTAGGGGATCAGCTAGCCTTGCCAGTGTAGGGTGACAGGCCTCTC  
TGATAAGAGAAGCAAGTGGTTCTCTAGGGCTCTGTGTTGCCTTGAGGGAGGAGGAAGGTG  
GGCTTTGAAGTCTCAGTACAGGATGGGATGGACATTCCAGGTGGAAGGCCAGCCTATGC  
CAAGGGGCTGTAGGTGGGCAGAGTGGTGGGTGGGGAGCTGATATCTGCTGTGAACCTCCT  
[T, C]  
GGGGCTATTGCAGGAGAGCTTCAGGTTTCAGGCTGGTGAGTAGGAGGAGCATAGCAGTTGG  
ACTGCCCTGGGTATTGAACGATTTGGCTACACAAGACTATTTTGCATCCTGGGAGTGTTT  
CTCTACAGAAATCCTCAGCCTTGTAATAATGGGAAATTCCTCCTATGAATTTATGCAATA  
GGACTTTTTTCCCTAGTGACTTGTAAATCACATTGTTTCAATGACGTGAATTCCTACATAA  
ATAGGTTTTGTTTCTGTGATAACTCTTACTGATACATCATTTTCTTTTACTACGCTGACT

3910 CTTCTCGGGGCTATTGCAGGAGAGCTTCAGGTTTCAGGCTGGTGAGTAGGAGGAGCATAG  
CAGTTGGACTGCCTGGGTATTGAACGATTTGGCTACACAAGACTATTTTGCATCCTGGG  
AGTGTCTCTACAGAAATCCTCAGCCTTGTAATAATGGGAAATTCCTCCTATGAATTTA  
TGCAATAGGACTTTTTTCCCTAGTGACTTGTAAATCACATTGTTTCAATGACGTGAATTC  
TACATAAATAGGTTTTGTTTCTGTGATAACTCTTACTGATACATCATTTTCTTTTACTAC  
[G, A]  
CTGACTTTGTAATAGATAGAAAGTCCTTATATACCTTTGTTGCCTTTCTTTTTTAAACAT  
CTCTTACCTGTGCTATTTCATTTACTCATCCAAATGCGCTTTATCCTGATTTTGTCCAG  
ACTTGAAATGAAGTTGCAATAGGCTTATATGTTAGTTTGGGAAGAGTTGGCCTTTAACGT  
TAAAAACAGTTCCATGGTGTCTTACTGTAGGCCAAGCCCTGCTCAAGGCCTGTTCTTCTTT  
TAGTCCCTTAGAATAAGCCTAATGAGATACATTAGAAAGCTGAGGCACATTTATTCCAGGT

6028 GTCTCTTGCCCTTGCCACCAAGGTGGCTTGCCACCCACAGCCTCTCGAGTAGCTGGGATTA  
CAGCATGTGCCACCATTGCCTGGCTAATTTTTGTATTTTTGGTAGAGACAGGTTTTACC  
TTGTTGGTCAGGCTGGTCTCGAATCCTGACCTCGTGATCCCCACCCCCACCCCCAGC  
CTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGCACCTGGCTGAGTTGGAGCTTTTC  
TTCCCTCTTTTTTGACTTTGGAATAAGCTCTTGTTCCATGATGCTATGTAGACAGTCCC  
[G, A]  
TTGACTGTGGCCTGTGCGGCATTGGGCAGCACTCTGGTGAACACTGAATCGGGTCTGACC  
TCCTAGCCCCACCATTTACTGGCTGAGCCTCAGTTTCCTTGCTGTAAATCAGGAAGAT  
GCTGGCTCTGCTCCTCTCTGCACATTCCCCGTCCTAACAACATTATAACTGTTAGGAAA  
GAGACGGGCTTGTTTTGGGATGGCTCATTTTATGTGACCCTGTGCGCTGTCTCTGAGTCC  
ATCTGCCCTTCTTCCAGGGTGTAGGGACCAGCCCCACAGGGTCGGTGGGTCTCTCCCTGT

8299 CATGACCACCTGTCCCCAGTGAGGAACATCTCTCCTGCCACACAGGCCTCCTGATCACTT  
GCCAGTGCCACGCATCCCTCTGCCAGCCGGATACAGAGAAGAGATTGTGCGGTACCTGC  
GGTCAGTGCAGTCCCTGACGGTGGCTGGGGCTGTGAGTGTGCCTGCCCTGTGTCACT  
GCACATGTGCATGTGTGTTCTCATGATGTAGGAGATGCTTGGGTTTCCAGGCAGCTGC  
CAGGGGTAGGAGTGATTGCAGCTGTGGGTGTGGGTGGGTGAGGGAGAGACTAGCAGGC  
[G, A]  
GGGAGTGGGCTGAAGGCCATGCAGGTGGGGCTCGGCTTCACATCTTTTGTAAATGGAT  
TTTGTGGCTGTTACGACACTCTTGAGACCCACATGTGAAAACCTGTCAGTCTGTTATCACT  
TAAGACAGAAGAAAATGCCCCTGACTCTGGGCTGGCAGGTGGAGACAAGGCCGAC  
AGCTTCTCTGCCATGTGGCACACACTTTGGGAGCAGAGCCATAGCCCAAAGTGGACCGCC  
CTTGAGCTAGAAGTGTGACTCAGGCGTGGGAAGGTGTAGAGCAGGCGGGTCACGGTGAG

8373 ATCCCTCTGCCAGCCGGATACAGAGAAGAGATTGTGCGGTACCTGCGGTGAGTGCAGCTC  
CCTGACGGTGGCTGGGGCTGTGAGTGTGCCTGCCCTGTGTCACTGCACATGTGCATGT  
GTGTGTCTCATGATGTAGGAGATGCTTGGGTTTCCAGGCAGCTGCCAGGGGTTAGGAGT  
GATTGCAGCTGTGGGTGTGGGTGGGTGAGGGAGAGACTAGCAGGCGGGAGTGGGCTGA  
AGGCCATGCAGGTGGGGCTCGGCTTCACATCTTTTGTAAATGGATTTTGTGGCTGTTA  
[C, G]  
GACACTCTTGAGACCCACATGTGAAAACCTGTCAGTCTGTTATCACTTAAGACAGAAGAAA  
ATTGCCCTTGACTCTGGGCTGGCAGCAGGTGGAGACAAGGCCTGACAGCTTTCTTGCCAT  
GTGGCACACACTTTGGGAGCAGAGCCATAGCCCAAAGTGGACCGCCCTTGAGCTAGAAGT

FIGURE 3Q



GTTGACTCAGGCGTGGGAAGGTGTAGAGCAGGCGGGTCACGGTGAGGAAGGAGTGGGGGG  
 CTCAGTTGTCATGGGAGGTGCATGAATTCGTACTGCAGAGTGGCTGCTCAGGGGTCTCCT

8424 GTGCAGCTCCCTGACGGTGGCTGGGGCCTGTGAGTGTGCCTGCCCCCTGTGTCACTGCACA  
 TGTGCATGTGTGTGTTCTCATGATGTAGGAGATGCTTGGGTTTCCAGGCAGCTGCCAGGG  
 GTTAGGAGTGATTGCAGCTGTGGGTGTGGGGTGGGTGAGGGAGAGACTAGCAGGCGGGGA  
 GTGGGCTGAAGGCCATGCAGGTGGGGCCTCGGCTTCACATCTTTTGTAAATGGATTTTG  
 TGGCTGTTACGACACTCTTGAGACCCACATGTGAAACTGTCACTCTGTTATCACTTAAG  
 [A, G]  
 CAGAAGAAAATTGCCCTTGACTCTGGGCTGGCAGCAGGTGGAGACAAGGCCTGACAGCTT  
 TCCTGCCATGTGGCACACACTTTGGGAGCAGAGCCATAGCCCAAAGTGGACCGCCCTTGA  
 GCTAGAAGTGTGACTCAGGCGTGGGAAGGTGTAGAGCAGGCGGGTCACGGTGAGGAAGG  
 AGTGGGGGGCTCAGTTGTTCATGGGAGGTGCATGAATTCGTACTGCAGAGTGGCTGCTAG  
 GGGTCTCCTGTGTTGACATGTTATGTCAGGTTAAGCCATTTTAGCATTCTTAGTTTTCTG

8680 CTTGAGACCCACATGTGAAACTGTCACTCTGTTATCACTTAAGACAGAAGAAAATTGCC  
 CTTGACTCTGGGCTGGCAGCAGGTGGAGACAAGGCCCTGACAGCTTTCTGCCATGTGGCA  
 CACACTTTGGGAGCAGAGCCATAGCCCAAAGTGGACCGCCCTTGAGCTAGAAGTGTGAC  
 TCAGGCGTGGGAAGGTGTAGAGCAGGCGGGTCACGGTGAGGAAGGAGTGGGGGGCTCAGT  
 TGTTCATGGGAGGTGCATGAATTCGTACTGCAGAGTGGCTGCTCAGGGGTCTCCTGTGTTG  
 [A, G]  
 CATGTTATGTCAAGTTAAGCCATTTTAGCATTCTTAGTTTTCTGAGGAACTCCACAGAA  
 AGTTTTGCTTTATTTCTTAGAAGTAAGGACAGATACCGGTTTCTCACCTGTCTCTGCTC  
 CTGTAGGCACATTGAGGATAAGTCCACCGTGTTTGGGACTGCGCTCAACTATGTGTCTCT  
 CAGAATTCTGGGTGTGGGCCTGACGATCCTGACCTGGTACGAGCCCGGAACATTCTTCA  
 CAAGAAAGGTACGGCATGTGCAGCATGTGCTGGGCCAGGGGTTCGTGTCAACTCGATAAT

8700 ACTGTCACTCTGTTATCACTTAAGACAGAAGAAAATTGCCCTTGACTCTGGGCTGGCAGC  
 AGGTGGAGACAAGGCCCTGACAGCTTTCTGCCATGTGGCACACACTTTGGGAGCAGAGCC  
 ATAGCCCAAAGTGGACCGCCCTTGAGCTAGAAGTGTGACTCAGGCGTGGGAAGGTGTAG  
 AGCAGGCGGGTCACGGTGAGGAAGGAGTGGGGGGCTCAGTTGTTCATGGGAGGTGCATGAA  
 TTCGTACTGCAGAGTGGCTGCTCAGGGGTCTCCTGTGTTGACATGTTATGTCAGGTTAAG  
 [C, G]  
 CATTTTAGCATTCTTAGTTTTCTGAGGAACTCCACAGAAAGTTTTGCTTTATTTCTTAG  
 AAGTAAGGACAGATACCGGTTTCTCACCTGTCTCTGCTCCTGTAGGCACATTGAGGATA  
 AGTCCACCGTGTTTGGGACTGCGCTCAACTATGTGTCTCTCAGAATTCTGGGTGTGGGC  
 CTGACGATCCTGACCTGGTACGAGCCCGGAACATTCTTCAAGAAAGGTACGGCATGTG  
 CAGCATGTGCTGGGCCAGGGGTTCGTGTCAACTCGATAATGAGCTCTCACAAACGAGATA

8996 TAAGCCATTTTAGCATTCTTAGTTTTCTGAGGAACTCCACAGAAAGTTTTGCTTTATTT  
 CTTAGAAGTAAGGACAGATACCGGTTTCTCACCTGTCTCTGCTCCTGTAGGCACATTGA  
 GGATAAGTCCACCGTGTTTGGGACTGCGCTCAACTATGTGTCTCTCAGAATTCTGGGTGT  
 TGGGCTGACGATCCTGACCTGGTACGAGCCCGGAACATTCTTCAAGAAAGGTACGGC  
 ATGTGCAGCATGTGCTGGGCCAGGGGTTCGTGTCAACTCGATAATGAGCTCTCACAAACG  
 [A, C]  
 GATACAGAAAGATGCACTTGCAGCTGAAAACAGTGGGCAAAAGCACATGAGCAGGGAATTT  
 GTCAAAGCAGAAGTAGGCAGACACTGTTTAACCTAGGCATCATTTTTAAAAAAGCAAAT  
 TAAGAGCCAGGCACAGTGAAGTGGCTCACGCCTGCAATTCCAGCACTTTGGGAGACTGAGG  
 TAGAAGGACCACTTCAACCTAAGAGTTCGAGGCCAGCCTGGGCAACATAGTGAGACCTGG  
 TCTCTACAAAAACAATAAAATATTAGCCAGGTGTGATGATATGCACCTGTAGTCTCAGCT

10590 CATGAGATCCTGCCTTCTTTCTTGGTGAGCTTGTCACTATTGTCTCAGTTCACTGTGAG  
 CCTTTGGTGTCGTTGATGCTGCGTCCCCAAGGCTGCTGTCCGGTTCCCACCACACTCCTG  
 GCGCTGCCTGGTGAAGGAACGTGTTTAGGCTGCACCTTGCCCTAGTAGCTTTGTGGGTCT  
 TTATTGACTTTTGCATACCTTTTGGGGTTTGGAGCAGGGACTCCTCAGAAGCATGTTTAG  
 ATGGTGTGGCTGTGCCAGGACTGCTGCTGCTGAAGTGCTCTGGCATGGGGCCAGCGTGC  
 [T, C]  
 GGAGCTACTCTGGAGTCTAGGGTCTGTTGTTCCCATACAGGACCAGTCTGCCAAGTGG  
 AGATGACACAGACTGGGGCAGCTCAGGCTTGGCTCAGAGGGCGAGGCTGAGTGTGCGCTG  
 TCACCTCCCCACCTTGCCCTTCTCCAGGCGCATGTGCACCTGGGCCCCCTCGCTCACCTGAG  
 CACTGAGGTGTCCCTGGACCTTCCAGGTAGCTGTCTTCATGTGCTCCTTCTGGGGCCA  
 GGGGTTCACAAACACCTCTCCTGGGGCTGGACACACACACTCCCAGGAAAGCCACTGGTTC

FIGURE 3R

11090 CTTCCCAGGTAGCTGTCTTCATGTGCTCCTTCCTGGGGCCAGGGGTGCAAACACCTCTC  
CTGGGGCTGGACACACACTCCCAGGAAAGCCACTGGTTCCACCTAGGGGGCCGTGTAT  
CCAGGCAAGTTCTCAGCACTCTGGAACCTGCTTCGCACATGGGGGTTCGCAAGATCCACAT  
GAGGCTGCCCTTGCCCTCATGGAGAGGGGCACACGTGACTCCCAGAGGGTGAAGCTTCCCA  
GCTAGAGGCAGTGCAGACTTTGCTGACAGGAAGCAGATGACGTGGGCCTATTCTCTCCCC  
[G, C]  
CTCAGGTGGTGTGTGGCCATCCCCCTCCTGGGGGAAGTTCTGGCTGGCTGTCTGTAATGT  
TTACAGCTGGGAAGGCCTCAATACCCGTGTTCCAGAGATGTGGTATGTCTGCTGTTGATT  
GGGTGTGTTGGGTGCTGTGCTGTCTCCGGGGAGTAGAGTGACAGGGACCGTGGGTGAGGT  
GCAGGCTGTGACAGCAGAGAGGGGTGGGCATTCGTGGGTGGGTGGAGTTAGGCTCCTGG  
CAGAGGCCCTGATCAAGCTTGAGTCCGTGAGGGGTACAGAAAGGGGGAGGTTCCTCAATTG

11710 CATGGATGGAGGTACCCCGAGTCAGGCTGCAGGCAGGGCTGGGTGGCTTCCCTCTTGCTG  
TGGAAAGACTCAGCATCTGTAGAAGTGGGGGGGTGCCCCCTCCCCAGCCTGCACAGGGGCG  
TCCTGTGTTGCTGTGCTGCGTTTGTCTCCTTTGCTGGTGAATGTGAAGTGTGTCCCGAC  
GTGACACCTCACCTGTGGACTCAGCGTGTGTGCCTTTAAAGATCAGTGTCTGTGGCCAG  
GTGGGGTGGCTCATGCTGTAAATCCAGCACTTCGGGAGGCCGAGGCGGGCAGATCACGA  
[G, A]  
GTCAAGGGATCGAGACCATCCTGGCCAACATAGTGAATCCCGTCTCTACTAAAAATACA  
AAAATTAGCTGGGCGTGGCGGCGCGTGCCTCTAGTTTCCAGCTACTCGGGAGGCTGAGGC  
AGGAGAATCACTTGACCCTGGGAGGCAGAGGTTACCGTGAGCCGAGATCGTGCCACCATA  
TTCCAGCCTGGCGACGGAGTGAGACTCTGTCTCAAAAAAAAAAAAAAAAAAGATCAGTGT  
TGTTTTTTTTAAACAGAACCACATACTGTTTTAAATACCCAGCAAAATCAACATTAATTCT

12591 GTGCTGGGAGCCATGAGCCACTGCTCCCGCCTTATGTGGTGTCTTTAACCAGTGTCTTG  
TAACATTTTATGGCTATCTATTGAAAGCAGTGGACATCTCCCCAGAAAACTCGTGCAT  
ATGAGTTTACCCCGTTATGCATTTTGGGAAGTGAGACCCTGGAACCACACAGAGCCCTG  
CTGGCTTCCTTGAGTGTGTGGGAACCCCTGGTGGGGGTGTCCCTACAGAGCTATCATCA  
GGGCTGGGGGGGTCCCTTGTGTTAGATGACTTTGGTGCGGGGGTGGGGGTGGGGGTCA  
[G, A]  
GTTAGGGGAGGCAGGAAGTGAAGGGGCCCTCAAGAAAGGACAGCAGCAGTGTCTGATG  
CAAAGGCCGCGGGGTAAACCCCGGAAGCCAGTTTGGGTGGTGACGGGGAGGCACAGGGAT  
GGTGAGATCACCCCGGAGGGTAGACAGAGATACCAGAGTAGGGGGCAGGGTTAGGGTGC  
CGCTACCTGAGGCGGGCCGTAGAGCACATAGGTTGGGAGGTGTCTTGGGGCCATTCAAAT  
GCCCCGTGACTCTGCGCCTCGCCCGTGTGTAATGAGCGGCAGAGGAAGGACTGAGACGG

13431 AAAAAACACCTTTTAAAGTAAGTGGGTGTGAAAGTGGGCCAAGGCCTGATGCCACAGTCAG  
GGAGCAGGGAAGGCTCAGCATTGCTCACCTCACTTAAGGATGGGGCTAGCATCACATAA  
GGCATCACATAAGGATGGGGGTAGCAGGGAAGGGAGAGAAAAACATGAGGCACACAC  
AGACCCCTGGGAAGCTGGTGGAGCTGTGCTAACGTCAGCAGACCAGTGATCAAAGACCCAG  
GCCTTGGGGAGATTCCACAGACCTACAGACCTACAGTTTCTTTTTCTTTCTTTTCTTT  
[-, T]  
TTTTTTTTTTTTTGGAGACAGAGTCTCTCGCTCTGTACCAGGCTGTGTGCAGTGGCACAA  
TCTCGGCTCACTGCAACCTCCTCCAGGTTCAAGCGATTCTCTGCCTCAGCCTCCCGAG  
TAGCTGGGACTAGAGGCACACACCACCATGCCTGGCTTATTTTTGTATTTTGTAGAGA  
TGGGGTTTCGCCATGTTGGTACGGCTGGTCTCAAACCTCCTGACCTCAAGTGATCCACCAG  
CCTCGGCCTCCCAAAGTGCTAGGGTTACAGGCGTGAGCCACCGTGCCCCCTCCTAAAGTTT

14746 CATCCTATAATAAACAGTGAGCAAGCTCTGCCCAGAGGGGACTTGTGCTATGGGACAGTC  
AGTAGCTGTAGCCAGGGTTCTTGGGGGGGACTTCCAGGACTCAAGGGATGCAGGAGGCA  
GATGTGCACTGTGTCTCTGGAAGCAGGCCCTGAGGCGAGGTTTGGGTGCAGGATGTTTA  
TCAGGCCCTGCCATGGGGAAGAAGGAGGGGCAGAGGGAGGAAATGAGCTTCTGGGCAGACC  
TGGGACTCATGGAGCTGGGAGCTCCTCAGAGCGGTCTCCATAGGGGGCCTTCATGTG  
[C, G]  
CCTCGGGGTGAGTTGCTGGAGGGACCCCCACCCAGGAAGGGACTGGCCCAGGGCCCTGAG  
GGCGGATGGTGGGAGGCCACCCCTCCTGGTTTGGAGCCAGGCCTACCAGGTGCTCCAGGC  
CCCAAGGCTCAGACACTGCCCCCTACCAGGAGCTCTATGTGGAGGACTTCGCCAGCATTGA  
CTGGCTGGCGCAGAGGAACAACGTGGCCCCCGACGAGCTGTACACGCCGCACAGCTGGCT  
GCTCCGCGTGGTATATGGTGAGCGCCTCCTGAGGGGCCGGCAGGGCAGCCAGGGTCAGG

14975 CTGGGCAGACCTGGGACTCATGGAGCTGGGGAGCTCCTCAGAGCGGTCTCTCCATAGGGG  
GCCCTCATGTGCCCTCGGGGTGAGTTGCTGGAGGGACCCCCACCCAGGAAGGGACTGGCC  
CAGGGCCCTGAGGCGGATGGTGGGAGGCCACCCCTCCTGGTTTGGAGCCAGGCCTACCAG

FIGURE 3S

GTGCTCCCAGGCCCAAGGCTCAGACACTGCCCCCTACCAGGAGCTCTATGTGGAGGACTT  
 CGCCAGCATTGACTGGCTGGCGCAGAGGAACAACGTGGCCCCGACGAGCTGTACACGCC  
 [G,C]  
 CACAGCTGGCTGCTCCGCGTGGTATATGGTGAGCGCCTCCTGAGGGGCCGGCAGGGCAGC  
 CCAGGGTCAGGGTCAGGGTGTGCGCCACTCATTACGCACCTCATCCCTGCCAGCGGCAC  
 TGGGCCACCTCCTCTGTGCCAGGCCCCAGGGGGCGGGATCTCATCGCCTGCCCCCTCCAC  
 CCTGAGAACCAGCTGGTCTTCTACTCTCAGGAGTCCACCCTGTGCAAGGGTGTGTGGTAG  
 GAGGTGTGGGGCAGCCCCCTCCTGGGCAGGGAAGGAGGAGCTCAGAGACCAGGCCTGGGGG

16031 TTCCGTCCCCACCGGCTCTTGTCTCAGTGTGCCTGGACACTCTCCTAGAGGCCCTCC  
 CTGAGATCTTGTGGCTAGCTGGCTAGCTGGGAGGGGTGCTTTTTCCTCACTTGGTTCCC  
 TCTCCCAACAGTTTCATCATTTCGCCATTCTCCCGTGGGGTTTAGACATGCCAGGGTGG  
 GTGGGAGTAGCAGGTGCCACTCCTGATTCTCTCCTGCCTAGCTAGGGACTTGGAGCTCTCA  
 CCTCTGTGGGGCTGCAGGGGTCCAGGTGTGGCCAGTTCAGTGACCTTAGAGGGTGAAT  
 [C,T]  
 CCGGGCTGTGCTGGTGGTGGCGCCTCCTGACAGAGTCAGCAGGCCCTGGGCTGTGCT  
 GCAGCTGTGCGGTAGCTGTGCGCGTAGCTGTGCGGTGTAGTGGGTGGCTTAGGCATT  
 CTCTGGACATACCCAGGTGGCACTGGGCCACTGAGTCCCACCCTGACACTGCATCTCGGA  
 TTTTCTGGGCCTCATGCCACCTCAGTGGATCACAAATCCTGACTGACCCTGCAGCGGGTC  
 CTTGTTTTTTGTCTCAGCAGTGATGTGGTTCTTTGTGGGTTTTGGTTTAATCCCATATAG

16891 GTGGAGTGCTGCTCCTTCTCACAGCCTAAGGCAGGCTGTGGCCTTGCCGACACTGCCTC  
 TGTCTGAGTTGGGTCTTGGGGACACAGTTGTTGCCCATCCTCGCTCAGGAAATGCCGTGT  
 AGAGCAGAAGGCCCTGTCTTGGCCCTGAGTGATCTGCACGGCACTTATGCCTGGGGGC  
 TGCTGTGGATCTGGACGAGACCTTGTCCCTGGAGGCTGCTGTGGGTCTGGAGCGGACCT  
 TGACAGGGCTGTCTCTCCTGCAGATCTCGAAAACCATCAACATGCTTGTGCGCTGGTATG  
 [-,T]  
 GGACGGGCCCGCCTCCACTGCCTTCCAGGAGCATGTCTCCAGAATCCCGGACTATCTCTG  
 GTGAGTGTGGCTGGGATATGCTGGCGGGGCCTCTCACGAAGACTGGATCTGAGCCCCAGC  
 TGCATCCCAGTGAGGGGGCCCCACGGTGCCATCTGGGAATACTGCCAGGGAATACCTCC  
 AGGAACCAGCAGTGTGAGGGCTTGTGGAAGCCACTGAGGGTTGTCTTTGAATTGGAAGAT  
 TTGCCACCCAGTGGAAGTGTGGGGTGTTCACAGAAGGTAGAGTGAGGAAGGGGTGGTAG

19359 CCACACACCACCCCTGCCAGTCCCCATGTCTGTCTGGTCAGTGCCAGCTCTGTCTCA  
 CTAGGGTTTGGTCACCGGCCCTTTGAACTGAGACCAGGCTGTGTACCTGTGAGCCCAGCT  
 CGGGGTGAGATTTGAGGTGGAGCCTTCCCAGCCCTGTGCAGAATCCCATCACCTCCAGG  
 TGTACTCAGAAATGGGGATCATTGGCCAGGTGCGGTGGCTCACGCCCTGTAATCCCTACAC  
 TTTGGGAGGCCAAGGTGGGCGGATCACAAGTTCAGGAGATAGAGACCATCCTGGCTAACA  
 [C,T]  
 GGTGAAACCCCGATGCTACTAAAAAATACAAAAAAATTAGCTGGATGTGCTGGCAGGAG  
 CCTGTAATCCCAGCTACTCCGGAGGCTGAGGCAGGAGAATGGCGTGAACCCAGGAGGCGG  
 AGCTTGCAGCGAGCTGAGATCACGCCACTGCACTCCAGCCTGGGCAACAGAGCGAGACTT  
 CATCTCAAAAAAAAAGAAATGGGGTCATTTCAGGCATCACCATGACTGAGGTGCGCCA  
 CTGTCATTGGGTGAGAGCAGCTGGATGCTCTATGTGTAGGTGCTGGAGCCTCTGAGGGAT

19405 CCAGCTCTGTCTCACTAGGGTTTGGTCACCGGCCCTTTGAACTGAGACCAGGCTGTGTAC  
 CTGTGAGCCCAGCTCGGGGTGAGATTTGAGGTGGAGCCTTCCCAGCCCTGTGCAGAATTC  
 CCATCACCTCCAGGTGACTCAGAAATGGGGATCATTGGCCAGGTGCGGTGGCTCACGCC  
 TGTAATCCCTACACTTTGGGAGGCCAAGGTGGGCGGATCACAAGTTCAGGAGATAGAGAC  
 CATCCTGGCTAACACGGTGAAACCCCGATGCTACTAAAAAATACAAAAAAATTAGCTGG  
 [A,G]  
 TGTGCTGGCAGGAGCCTGTAATCCCAGCTACTCCGGAGGCTGAGGCAGGAGAATGGCGTG  
 AACCCAGGAGGCGGAGCTTGCAGCGAGCTGAGATCACGCCACTGCACTCCAGCCTGGGCA  
 ACAGAGCGAGACTTCATCTCAAAAAAAAAGAAATGGGGTCATTTCAGGCATCACCATG  
 ACTGAGGTGCGCCACTGTCTATTGGGTGAGAGCAGCTGGATGCTCTATGTGTAGGTGCTGG  
 AGCCTCTGAGGGATCGTCCAGTCTTAGAAGTGTCTCAGAGGGACACTGTCTTGCCTGGT

19653 CTAACACGGTGAAACCCCGATGCTACTAAAAAATACAAAAAAATTAGCTGGATGTGCTG  
 GCAGGAGCCTGTAATCCCAGCTACTCCGGAGGCTGAGGCAGGAGAATGGCGTGAACCCAG  
 GAGGCGGAGCTTGCAGCGAGCTGAGATCACGCCACTGCACTCCAGCCTGGGCAACAGAGC  
 GAGACTTCATCTCAAAAAAAAAGAAATGGGGTCATTTCAGGCATCACCATGACTGAGG  
 TGCGCCACTGTCTATTGGGTGAGAGCAGCTGGATGCTCTATGTGTAGGTGCTGGAGCCTCT  
 [G,A]

FIGURE 3T

AGGGATCGTCCAGTCCTAGAAGTGTCTCAGAGGGACACTGTCTGCCTGGTGGCCCATG  
 AAGAAAGGGAGGGCTCCCTGAGTCTCCCTGACGTGTGTCTGCCTGCAGGGCTCAGCCTTC  
 TCTGAGGCCCTTGTAGCCATGAGGGGTGCCAGGGCTCAGAGCCTGAGGCTGAGCGTTG  
 GCTGGGTGGGAGCCCCACACCTGGCCCTCAGGCGCCATTGGATCCTGGAGGCAGTGGC  
 TGGGAGTGGGAGGGGCTGCATCTGCTGCTGTAACACCATCCTTTGTGTGTAGGGCACCA

19742 AGGCTGAGGCAGGAGAATGGCGTGAACCCAGGAGGCGGAGCTTGCAGCGAGCTGAGATCA  
 CGCCACTGCACTCCAGCCTGGGCAACAGAGCGAGACTTCATCTCAAAAAAAAAAGAAATG  
 GGGTCATTTCCAGGCATCACCATGACTGAGGTGCGCCACTGTCAATTGGGTGAGAGCAGCT  
 GGATGCTCTATGTGTAGGTGCTGGAGCCTCTGAGGGATCGTCCAGTCCTAGAAGTGTCTC  
 CAGAGGGACACTGTCTGCCTGGTGGCCCATGAAGAAAGGGAGGGCTCCCTGAGTCTCCC  
 [T, C]  
 GACGTGTGTCTGCCTGCAGGGCTCAGCCTTCTCTGAGGCCCTTGTAGCCATGAGGGGTG  
 CCCAGGGCTCAGAGCCTGAGGCTGAGCGTTGGCTGGGTGGGAGCCCCACACCTGGCCCT  
 CAGGCGCCCATTTGGATCCTGGAGGCAGTGGCTGGGAGTGGGAGGGGCTGCATCTGCTGCT  
 GTAACACCATCCTTTGTGTGTAGGGACCAACGGCTCACAGATCTGGGACACCGCATTCG  
 CCATCCAGGCTCTGCTTGAGGTTGCTGGCTCCTTCTCTTTTCTCAGCCTCAGCTGACCTT

20054 GCCTGCAGGGCTCAGCCTTCTCTGAGGCCCTTGTAGCCATGAGGGGTGCCAGGGCTCA  
 GAGCCTGAGGCTGAGCGTTGGCTGGGTGGGAGCCCCACACCTGGCCCTCAGGCGCCCAT  
 TGGATCCTGGAGGCAGTGGCTGGGAGTGGGAGGGGCTGCATCTGCTGCTGTAACACCATC  
 CTTTGTGTGTAGGGACCAACGGCTCACAGATCTGGGACACCGCATTCGCCATCCAGGCT  
 CTGCTTGAGGTTGCTGGCTCCTTCTCTTTTCTCAGCCTCAGCTGACCTTCCTGTGACGT  
 [A, G]  
 AGCCACGCATCCACCTGAGGGCAGCACTGCTGGCCACACACTTGCCACTCCTCGATACT  
 TCCAGTGACCTGGGCTCTGGCCTCTGGCTTCAGAGGGTCTGCTGCTGTGGAGGGGGCGGCT  
 TGGCCAGCAGCCTTGGGTGTTGGGCTGGGTGGGGGCTTGGGAGGGCAGGGGCTGGAGG  
 CTGTGTGAGAAGGGGAGTCTGGTGAAGGCTGTTTCTGAGAGTGCAGGCAGGAGTGGGACT  
 CCAGGCTCTTCTTAGAACTGGAACCTGCTTGGGCCAGGCACGGTGGCTCACACCTGTAATC

20627 CCAGGCACGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCGAGGAGGGTGGATC  
 ACGAGTGCAGGAGTTCAAGACCAGCCTGGCCCAAGATGGTGAAACCCCGTCTCTACTAAAA  
 GTACACAAAAATTAGCCAAGCGTGGTGGCGGGCACCTGTAATCCCAGCTACTTGGGAGGC  
 TGAGGCAGAGAATTGCTTGAACCCGGGAAGTGGAGGGTGCAGCGAGCCGAGATTGTGCCA  
 CTGCACTCCAGCCTGGGTGACAGAGAGAGGCTCCGTCTCAAAAAAAAAAAAAAAAAAAAA  
 [-, A, G]  
 AACTGGAACCTGTTTGTATGGGCATTTCTCGAGCCAGTACTGGAGAAAAACGAGAGTGGAT  
 TTTTATGCCGGTGGGAATGAGGTAGGTGGGATTCTGAAGGTGTTTCTGGAGAGCCCTGAG  
 GGCTGGGCCACGCAAGGGCCTGCCTACACAGGGTCTGGAGACCCCTCTGGGCATGGATG  
 CTGGCCAGGCAGGGGGGTGCTGGCATCCATAAATGGTCTCCTGCGCCCTTCCATCTTCAG  
 TCATATCTCATGGACTTTTGCTGTTTGTCTTTAAAGGTAAGTGCAGCAGGAGACCTTGG

21337 AGCCTCTCTGTCTGTCTCTTCCAGGCGGGCGGGCACACAGGCCCGAGTTTTCGTCT  
 TGCCTGCAGGAGGCTCATGAGTTCTGAGGCTCTCACAGGTGAGGCCGCTGCTGGGGC  
 TCTGAGGGGGCTGAAGAGGGGGATCAGGGCTGGGAGCTCCTGCAGGCAGAAAGTGCCCAAC  
 TCACCTCCACCTGCCCTATTTCCTGCACTGGTGTTCAGGGTCACCCCCACCTCCCAT  
 CCCCCTCCCTAGCCCCGTCTCCATCCACCGGTCTCCTCGGGCTGGCCTCACCTGGGGCAG  
 [T, C]  
 TCTCTGAGGCCTGCAGGGTGTGGGGGTGCTGGCAGTTTCTGCGTCTCTGCTCATGTTGGA  
 GCCACTGTGTGAAGGGCCAGGCACGGGCAGGGGCTGTGTACCTGAGCTGCACAGCCTA  
 CACGGCACCTCCATGTCTCTGAAGCACCTTCTGCCCATGGAGGTGACGCCAGCCTGTGGA  
 CTTGCCCTCCTGAGACTGTTTGCAGCAAAAGCCCCGGTCCCTCCTGCCAGATCAGCTGCC  
 CACAGACCTGCCCGAGCCCATAGTTTGACCTCAGTGTCTCTCACACGTGCCTGCACCCC

21894 GCCCATAGTTTGACCTCAGTGTCTCTCACACGTGCCTGCACCCCAGTCTGCAGCCACAGT  
 CATCCCATACATGCGCCCCAACCTCCCGTGTCTCCACACCCCTGTCCCGGCCACGGCCTC  
 AGCCAGTGTCCCTCTGCCTGGAACCGCTGCCCCCAGCCCCGTCTCCCTCCCTTCAGCTC  
 TCACTAGGACATTGTTCTGCAGGGCTTCTGGGTCTTCTGGCCTCTGTGTGGCCAAGGCT  
 GGCACCATCTTGGGCTCAAGCAGAGGAGGGGCATTGTCTGCTGTGCTGGCCCAATGG  
 [C, T]  
 GGCTGCTCCTGCTCCTGCCTCCTGCCAGGACTTGCTCTGGGTGATGGGGACTTGGGGA  
 GGCTGACTGAACCCCTACGGCACTCCAGGCTCTTCCCTTCTCACTGAGGTGAGAGAGGCA  
 GCCAGAAGCTGAGGTTGTTTCAGGAGGCATTGGGGCGCCTGGCACAGAGCACACCCGCGAG

FIGURE 3U

AGACCTGGGCCCCCTCCCTGCCTTCTGGCCGGTGGGGAGATCACAGGGGAGTCAGGTGCT  
GACTCCAGTCCCGTCTGGGCTGGTTTGTAGCCCTCGCTGGCCAGTCACGTTTCCAGCAG

23360 TGAGAACTGGGGTGTGGACACCCCCAGCCTGGAGTCATGGCTTGTGCTCTGCAGGGTGGC  
TTCTCCTTCAGTACGCTGGACTGCGGCTGGATCGTTTCTGACTGCACGGCTGAGGCCTTG  
AAGGCTGTGCTGCTCCTGCAGGAGAAGTGTCCCCATGTCACCGAGCACATCCCCAGAGAA  
CGGCTCTGCGATGCTGTGGCTGTGGTAAAGGCTGTGGTCCCAGCAGCCCCGTCCATACCTC  
GTGTCTGCAGATGAGCTGCGTGCTCACTTCCACTCCTGTGGGCTCCAGCCCAGCACACA  
[G, T]  
TCCGGCCAGGCCGTAGGAGCTTGTCTTGGATGGTGTCTATATGTGGAGAACTGTGAGCT  
CTGGCTGGACCCCTAGGGGCTTGTCTGGGCTGTGTGCACAGGGCCCTGCACTGCGGAGCT  
GGTGTCCAGCTCGGATACAGGTGTGGGGAGCCGGCGTGGCCCCAAGGTTTCTCTCT  
GGTGGTTTCCACTGGGTGTCTGAAGAGGGAATTTGTGGTGTGGTTTGGTGCCACATC  
CTTTCAGCACATCTGGCTTTTGTGTGTGTTCAGTGGAGACCCTGCCCTTTCTGGCA

26758 CAACCTCCGTTTCCGGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGAC  
TACAGGTGCTGACCACCATGACTGGCCAATTTTGGTATTTTATTAGAGACAGGGTTT  
TACCATGTTGTCCAAGCTGGTCTTGAATCCTGACCTCAGGTGATCCACCTTCTTGGCC  
TCCCAGAGTGCTGGGATTACAGGTGTGAGCCACCACACTGGCCTTTGCTATTTTCTTCT  
CCTTTATTTTCTAATCTGAATACCTAGATATTTGATTTTCAGGCTTTTATTGAAATATG  
[A, C]  
ATTTGAGGCTATAAATGAGTTTGTAGATATCATTAGTTAAATGTGTGTTCTGGTGTCTG  
CTGTGGTAGCACAGATACTAAAGTGTTTTCTGTTTCTACTGTTCTTCTCTGGCCCCATGA  
GTTATGTGGGAGTATGCTGCTTCAATTAACAATCTGAGAATGTTCTGGTGTGGTTTTTTG  
GAAGCCGTGGATGGAGCAGGGTTTTCTGTGCTTCACAGGTGCAGCTAGGAGGGCACTG  
TGTCAGGGTCTTCTGTCTGGCCTGGCGTGGCCCTTGCCATGTGCTGCTCTGCGGCATGA

27033 ATTTTCAGGCTTTTATTGAAATATGAATTTGAGGCTATAAATGAGTTTGTAGATATCATT  
CAGTTAAATGTGTGTTCTGGTGTCTGCTGTGGTAGCACAGATACTAAAGTGTTTTCTGT  
TTCTACTGTTCTTCTCTGGCCCATGAGTTATGTGGGAGTATGCTGCTTCATTTACAATCT  
GAGAATGTTCTGGTGTGGTTTTTTTGAAGCCGTGGATGGAGCAGGGGTTTTCTTGTGCT  
TCACAGGTGCAGCTAGGAGGGCACTGTGTCCAGGGTCTTCTGTCTGGCCTGGCGTGGCCCT  
[T, C]  
GGCCATGTGCTGCTCTGCGGCATGAGGTGGGCGTGAGTTGTCTCAGCCACATTTAGAGA  
ATTGGCCTTTTAAAAAATAGATCATCTTTTAAAAATCACTGTAATAAAAGTAAAGCAGGT  
TCTTTGCAACAAGACTTGCAAAATACAGAGAAGCGCAAAGAAGAAGCTAAGTCGCCCCCT  
CCTCGCCCCCTGAAGGAGAATCTGCTGTTGCTGTTGGTCTCCACATTTCCATGGCGGCT  
GCTGCCCTTTACGCCTGGCCCACTTTGTGCTGGTGAGGTTTCTAAAGCCCCACCT

27332 TTGGCCATGTGCTGCTCTGCGGCATGAGGTGGGCGTGAGTTGTCTCAGCCACATTTAGA  
GAATTGGCCTTTTAAAAAATAGATCATCTTTTAAAAATCACTGTAATAAAAGTAAAGCAG  
GTTCTTTGCAACAAGACTTGCAAAATACAGAGAAGCGCAAAGAAGAAGCTAAGTCGCCCC  
CTCCTCGCCCCCTGAAGGAGAATCTGCTGTTGCTGTTGGTCTCCACATTTCCATGGCGGC  
TTGCTGCCCCCTTTCACGCCTGGCCCACTTTGTGCTGGTGAGGTTTCTAAAGCCCCACC  
[C, A]  
TTGAGCGCGCTCCTCCAGCACGAGCAGTAATGGCACAGGTGTTGTGTCATTTTACTCAGT  
AGCCTCTGGGTTATTTTTCAGTTTTCCTTGTGTTTGTGTTTGTAGCTTTTCCCCATTTAACCT  
TAACCTGGTATTTTCTGTTAAATATTTATTCATGACCATTATTATCCCTAGAGCCACAT  
GGCTTGGGGTCCACCTGCCTGGGTCCGCCCCCATCCCTGCCCCCTTCTGGCTGTCTGACCT  
GGCCTGGTGACTTCTCTCTCTGCTCATCTCTCTCCCTGCCTGAGTGGGCAAGAGTACAG

27538 TGTGTGCTGTTTGGTCTCCACATTTCCATGGCGGCTTGTGCCCCCTTTCACGCCTGGCCCCA  
CTTTGTGCTGGTGAGGTTTCTAAAGCCCCACCTTGTAGCGCGCTCCTCCAGCACGAGC  
AGTAATGGCACAGGTGTTGTGTCATTTTACTCAGTAGCCTCTGGGTATTTTTCAGTTT  
CCTTGTGTTTTTTTAGCTTTTCCCCATTTTAACTTAACTGGTATTTTCTTGTAAATAT  
TTATTCATGACCATTTATTATTCCTAGAGCCACATGGCTTGGGGTCCACCTGCCTGGGTC  
[C, A]  
GCCCCCATCCCTGCCCCCTTCTGGCTGTCTGACCTGGCCTGGTGACTTCTCTTCTGCTC  
ATCTCTCTCCCTGCCTGAGTGGGCAAGAGTACAGCCTCACAGAGTGGTGGGATTGTGTGA  
GATGCCACAGGGAAGCACATGTCACTGTTGTCACTGTGTAGAACAATGAGTCCCGGATG  
TGGCCCGCAGGGGAGCAATGGTGACTTAATCGCGGGCTTCTCTGCATTTCTTTGGTGAC  
TTCCAAGCTAGAACATTTCTTTTTTGTATTGTTTGAAGCAGGGTCTCACTCTGTTAC

FIGURE 3V

27625 CCCCACCCCTTGAGCGCGCTCCTCCAGCACGAGCAGTAATGGCACAGGTGTTGTGTCATTT  
TACTCAGTAGCCTCTGGGTATTTTTTCAGTTTTCCCTGTTGTTTTTAGCTTTTCCCAT  
TTTAACCTTAACCTGGTATTTTCTTGTTAAATATTTATTCATGACCATTATTATCCCTAG  
AGCCACATGGCTTGGGGTCCACCTGCCTGGGTCCGCCCCCATCCCTGCCCCCTTCTGGCTG  
TCTGACCTGGCCTGGTGACTTCTCTTCTCTGCTCATCTCTCTCCCTGCCTGAGTGGGCAA  
[G,C]  
AGTACAGCCTCACAGAGTGGTGGGATTGTGTGAGATGCCACAGGGAAGCACATGTCAGTT  
GTTGTCACTGTGTAGAACAAATGAGTCCCGGATGTGGCCCGCAGGGGAGCAATGGTGACTT  
AATCGCGGGCTTCCCTCTGCATTTCTTTGGTGACTTCCAAGCTAGAACATTCTTTTTTGT  
TTATTTGTTTGAAGCAGGGTCTCACTCTGTTACC'TAGGCTGGAGTGCAGTAGCAAAATCA  
TGGCTCACCACAGTCTCAAAC'TCCGGGCTCAAGCAATCCTCCACCTCAGCCTCCTGAG

27736 TTTCCCATTTTAAACCTTAACCTGGTATTTTCTTGTTAAATATTTATTCATGACCATTATT  
ATTCCCTAGAGCCACATGGCTTGGGGTCCACCTGCCTGGGTCCGCCCCCATCCCTGCCCC  
TTCTGGCTGTCTGACCTGGCCTGGTGACTTCTCTTCTCTGCTCATCTCTCTCCCTGCCTG  
AGTGGCAAGAGTACAGCCTCACAGAGTGGTGGGATTGTGTGAGATGCCACAGGGAAGCA  
CATGTCAGTTGTTGTCACTGTGTAGAACAAATGAGTCCCGGATGTGGCCCGCAGGGGAGCA  
[A,G]  
TGGTGACTTAATCGCGGGCTTCCCTCTGCATTTCTTTGGTGACTTCCAAGCTAGAACATTCT  
TTTTTTTGTATTTGTTTGAAGCAGGGTCTCACTCTGTTACCTAGGCTGGAGTGCAGTA  
GCAAAATCATGGCTCACCACAGTCTCAAAC'TCCGGGCTCAAGCAATCCTCCACCTCAG  
CCTCCTGAGTAGCTGGGACTACAGGTGCATACCATCACCTGTGGCTAATTTTTTAAATGT  
TTTGTATTTTTTAAATGTTGCTCAGGCTGGTCTTGAAGTGTGGGCTCAAGCAATCCTCC

30688 TACGCAATTGATTTTGTACTGATCTCATAGCTAGACAATTTTGTCTAAACTTTTAAAAA  
ATTTATGTACTTTATCTTTTATAGCAGCTTTAAATTTACAGAAAATTTGAGTGGGAAGATG  
CAGTGTTCCTATAAAGCCGCTAACCTCTCGCACCTTCCCTCAAGTTTCCCCAGTACTAAC  
ATCTTGCAATCAAGTGGTGCCTTTGCAACATTCATAAATTATTATCGTCCAGAGTCCATT  
GTTTACATTACAGCTTCTCTTCATGTTGTTTCAATCTGTGGTTTCACAGATGTGTGATGCA  
[T,C]  
GTGCCCCACCACTGCAGTGTACACAGGATCTCACTGCCCCGGAGTCCCTCTGCGCTGTCCC  
CGCCTCCAGAACCCCTTAGTAGCAAACTGATATTTTACTGTCTCCATAGTTTTGGCT  
TTTCAGACTGACCTATTTTCACTTAGTAAGAAGCATTTAAGATTCCCTGAGTCTCTTTCTAT  
GGCTCAATAGCACATTTCTTTTAGTGCTGAATAATATTCATTGTCTGGATGTACCACA  
GTTTATTCATTACCTACTAAGGTGAATGTCTTGCTTGCTTCCAAGTTTGGCAACTATG

31172 TCAATAGCACATTTCTTTTGTAGTGCTGAATAATATTCATTGTCTGGATGTACCACAGTT  
TATTCATTACCTACTAAGGTGAATGTCTTGCTTGCTTCCAAGTTTGGCAACTATGAAT  
AAAGTTGCTATCAATGTTAGCGTGCACATAAGTTTTTCAGCTCATTTGGGTAAATGCCAAG  
AAGCATGATTGCGGGATCCTATGGTAAGAGTGTGTTTAGTTCTGTAAGAAGCTGCCAAAC  
TGTATCTTAAGTGGCTGCACCATTGCGTTTCCACCAGCAATGATGAGCGTTTGTGTCT  
[C,T]  
CACATCCTCACCAGCATTTGCTGTTGTGTTTGGGTTTTAGCCTTTCTAAGAGGTGTGTA  
GTGGTATCTCCTTGTTCATTTGCAATTCCTAATGACATTATGTTAAAATCTTGTCAT  
ATAGTTATTTGCCATCTGTGTATCTTTTTCAGTGATGTGCTCTTAAAGTCTTTGGCTCA  
TTTTTAAATTAATTTTCTTATTGTTGAGTTTTAGTTCTTCATATATTTTGGCTGCCAGT  
CCTTTATCAGATATGCTTTTCGCAATATTTTCTGCCGTGTCTTGTCTTTTCATTCTAT

31433 ATTTGCGTTTTCCACCAGCAATGATGAGCGTTTTTGTGCTCCACATCCTCACCAGCATTTG  
CTGTTGTGTTTTGGGTTTTAGCCTTTCTAAGAGGTGTGTAGTGGTATCTCCTTGTTCAA  
TTTGCAATTCCTAATGACATTATGTTAAATCTTGTATAGTTATTTGCCATCTGTG  
TATCTTTTTCAGTGATGTGCTCTTAAAGTCTTTGGCTCATTTTTAAATTAATTTTCTT  
ATTGTTGAGTTTTAGTTCTTCATATATTTTGGCTGCCAGTCTTTATCAGATATGCTTTT  
[C,T]  
GCAAAATATTTTCTGCCTGTGTCTTGTCTTTTCATTCTATTAACAGTATCTTTTGCAGAGC  
CAGTTTTTCATTTCAAGGAAGTCCAGCTTATCAATGTTCTCTTTTCATGTATCATGTTTTG  
GTGTTGTATCTAAAAGTTACTGCCAAGCCCAAGGTACCTAGATTTTTTCTGTGTTAT  
ATCTAGGATTTTTAAAGTTTTGCAATTTTACATCTAGGTCCATGATTCATTTTGAGTTAA  
CTTTTGTGAAGGGTTTATGGTTTTGTGCTAGATTTTTTTTTTTTTTTTTTTTGCATGT

32660 CTCTGGGCTTAAGGAATCCTCCTGTCTCAGCCTCCTGAGCAGCTAGGACCACAGGCATG  
TGCCACTACGTTACGTAATTTTTCAATTTTTTGTAGAGATGGGATCTTGCTCTGTGTC  
CCAGGCTGGTCTCAAAC'TCCGCTCTGCTTTGAGATGATTATATATTTGTGTCCTTTGTTA

FIGURE 3W

ATTTAGAGGATTATTATGGATTTTCTAATGTTAAGACACCTTTGTATTTCTGAGATCGA  
CCTTAGTATTGGTCTATATTTAAGACAGTATTCAGTTTCTCAGTTGTTTTTGTTTTTTG  
[G, T]  
TTTTTTTTTTTGGAGACAGAGTCTCTGTCTCCAGGCTGGAGTCCAGTGGCACAATCTCAG  
CTCACCGCAAGCTCTGCCTCCCGGATTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAG  
CTGGGACTACAGGCGCTGTATCATGCCAGCTAATTTTTTGTATTTTAGTAGAGACG  
GGGTTTACCATGTTAGCCAGGTGGTCTCAATCTCCTGACCTCGTGATCTGCCACCTC  
GATCTCCCAAAGTGCTGGGATTACAAGGCGTGAGCCACTGCGCCCGGCAGCAGTTTCTCA

32981

TCTCTGTCTCCAGGCTGGAGTCCAGTGGCACAATCTCAGCTCACCGCAAGCTCTGCCTC  
CCGATTTCAGCCATTCTCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGCCTGT  
CATCATGCCAGCTAATTTTTTGTATTTTAGTAGAGACGGGGTTTACCATGTTAGCCA  
GGGTGGTCTCAATCTCCTGACCTCGTGATCTGCCACCTCGATCTCCCAAAGTGCTGGGA  
TTACAAGGCGTGAGCCACTGCGCCCGGCAGCAGTTTCTCAGTTTAAATTTGGAGTTTTCG  
[A, C]  
TCTGTGTTTCATGAGTGAGCCTGAAATTTTCACTTTTCCATATCTTATTTCTCTGGGTTC  
TAGAATGAGCTAGAGAGTGTTCCTCCTTTCTGTCTCTGGAAGAGTTTGTGTGAGATTAG  
AATGAGTGTGCTGATAATTTAGTTGCATTCAATTTATAAAATTCCTAGGCCCTAGAGTTT  
TTTTCTGGGAAAAGTTTACATTTTGAATTTTCTCAGTTTCTAGTAGTTTGGAGTGTTTAGGT  
TCTCTATTTCTTGATTGAGCCAGTTTGTATAAGTTAATCTTTCTAATTTGTAGATATTTT

33557

AATCTTTCTAATTTGTAGATATTTCTCTAAGTTTGCAAATGTAATACATAAAACTTTCT  
TGTCATTTCTCACCATATCTGTAGTTCTATCTTTTATTGCTAATATTACTAATTTGTAC  
TTTGACTATTTGTATTTGTACCTGTTGCCGAGTAACAATATTAGTACAAACCTAGTGGC  
TTAGAACAACACACATTGATTACTTACCGTTTCTGTGTGTCAGAAGTCCAGGCGCGGCC  
TCGCAGGTCTGCTCTGCCTCAGGGTCTCTCCGGGCTTCAGTCAGGGTGTAGCCAGGAC  
[T, C]  
GGGTCTCGCCTGAGCTTCCAGTGAGGAAGGATCTGCCTCTGAGCACACAGGGTCTCGG  
CACGATCCCATTTCTCAGCTGGAAGCTGCCGACTGCCGTCTGCTGCGGGGCTCTCTAGA  
TGGCATCTTCACAAAAGCGAGAAGGGAGAGTTGGTAGAGGGAGTCTGCTAGCACCATGGG  
AGTCGCGGTACACAGACCTCGGTCCAGGACCCGACCCATCAACCCTGCCGTGATCTG  
CTGGTTAAAGACAAGTCCCACGTCCCACAGGGTGACACTGGAGTAGACACTTCGCCTCTGG

33652

TATTGCTAATATTACTAATTTGTACTTTGACTATTTGTATTTGTTACCTGTTGCCGAGTA  
ACAAATATTAGTACAAACCTAGTGGCTTAGAACAACACACATTGATTACTTCACCGTTTCT  
GTGTGTCAGAAGTCCAGGCGCGGCCCTCGCAGGTCTCCTCTGCCTCAGGGTCTCTCCGGG  
CTTCAGTCAGGGTGTAGCCAGGACCGGGGTCTCGCTGAGCTTCCAGTGAGGAAGGATC  
TGCTCTGAGCACACAGGGTCTCTCGGCAGATCCCATTTCTCAGCTGGAAGCTGCCGACT  
[G, A]  
CCGTCTGCTGCGGGGCTCTCTAGATGGCATCTTCACAAAAGCGAGAAGGGAGAGTTGGT  
AGAGGGAGTCTGCTAGCACCATGGGAGTCGCGGTACACAGACCTCGGTCCCAGGACCCG  
CACCCATCAACCCCTGCCGTGATCTGCTGGTTAAAGACAAGTCCCACGTCCCACAGGGTGA  
CACTGGAGTAGACACTTCGCTCTGGCCTTTTCAGAGAAGTGGTTATTTTGGAAATATC  
AGTTAGATGTAGGATGGGTCTTGCTCTCTAAATCTATTGTTTTCTCTAATTGATTTTT

34390

CTCTGCCAATCCGCTTCCCGCTCTGGTGTCTGTGGTTGCTTCTTTTAAACCCCTCATC  
GGTCTGTGTAAACTGTTTATTTTTATGTGGTTTTTAAGGGAGACCATTCTCATTCTTTTG  
AGACCCCTGGAAGGATGGAATTGGGATAGGTAAACTGCTGTTTTTACCAGAATGTTCACTG  
GACCAATCTCGTGTTCAGGGAGACCCCTCACGCAGGGCTTAGAGTTCTGTGCGCGGCAGC  
AGAGGGCCGATGGCTCTCGGAAGGGTGAGTGAGCCTCCACTCGTGAGTGACAGATGCA  
[T, C]  
GGGATCCAGAGGTTTCTGCTCTCACACACTGCGTTCATAAATGTTGGCTTGTATGTTGTT  
GCTACACCAGAAGTTTCTGGAAGTGAGCTGCCAGCCCGTGAATCTGGGGACCTCGTTC  
CTTTGTGGCATGCGTGGCCTTTGCCCCGGTGGAAATGCTCAGTACGTTGCTGGGCGCAG  
CCGGCTGCTGGGAGCGCGCTGTAGCCTGAGCGTGGCTATTCCCTCCACCCTTTCTGCTT  
GCTCTTAGGGTCCAGCAGACAGAGCTGCTGTCTTCCACGGCCTTAATGCCTGAGGCACTG

34399

TCCGCTTCCCGCTCTGGTGTCTGTGGTTGCTTCTTTTAAACCCCTCATCGGCTCTGTGT  
AAACTGTTTATTTTTATGTGGTTTTTAAGGGAGACCATTCTCATTCTTTTGGAGACCTGG  
AAAGGATGGAATTGGGATAGGTAAACTGCTGTTTTTACCAGAATGTTCACTGGACCAATCT  
CGTGTTCAGGGAGACCCCTCACGCAGGGCTTAGAGTTCTGTGCGCGGCAGCAGAGGGCCG  
ATGGCTCCTGGGAAGGGTGAGTGAGCCTCCACTCGTGAGTGACAGATGCATGGGATCCA  
[G, C]

FIGURE 3X

AGGTTTCTGCTCTCACACACTGCGTTCATAAATGTTGGCTTGTATGTTGTTGCTACACCA  
 GAAGTTTCTGGAAGTGAGCTGCCAGCCCGTGACTTCTGGGGGACCCTCGTTCCTTTGTGGC  
 ATGCGTGGCCCTTTGCCCCGGTGGAATTTGCTCAGTACGTTGCTGGGCGCAGCCGGGCTGC  
 TGGGAGCGCGCTGTAGCCTGAGCGTGGCTATTCCCTCCACCCTTTCTGCTTGCTCTTAGG  
 GTCCAGCAGACAGAGCTGCTGTCTTCCACGGCCTTAATGCCTGAGGCACTGGAGTTGGTG

34989 TGGAGTTGGTGGGCTGGCTGGGGCACGTGTGATTGTTGCAGAATGCGTGTGTTTCACAC  
 ACCGGCTGTGAACAGGGTGGAAGGGCTGAGGCTCTCCCTGTTTCCCTCCAGCTCCTGGGG  
 AGTTTGCTTCACCTACGGCACCTGGTTTGGCCTGGAGGCCTTCGCCCTGTATGGGGCAGAC  
 CTACCGAGATGGGTGAGTGAGTGCCCTGTCTCTGGTGGGTGGGGGTTCTCAACCCAATGC  
 TCTGTTCATGAGTGTTTTTGTCTTTGACATTTGGTTTTAGGGTTTGTGTTGTTGTTGTTT  
 [G, -]  
 TTTTGTGAGACGGAGTCTCGCTCTGTCAACCGGGCTGACATGCAGTGGCATGATCCTAGCT  
 CACTGCAGTCTCAAACCTCGTGGGCTCAAGCGATCCTCCCGAGTAGCTGGGATCACAGGTG  
 CACGCCACCACCCCGGGCTAATCTTTTAAACCTTTTATGTAGAGATGGAGTCTTGCTGTG  
 TTGCTCACACTGGTTTGGGCTCAAGCAGTCTTCTACCTCGGCCTTCCAAAGTGCTGGGG  
 TTACAGGCATGAGCCAATGTGCCTGGCCTGTTTTTAATATTTTTTAAACAGTGAGATAAGA

35067 GGAAGGGCTGAGGCTCTCCCTGTTTCCCTCCAGCTCCTGGGGAGTTTGCTTCACCTACGG  
 CACCTGGTTTGGCCTGGAGGCCTTCGCCCTGTATGGGGCAGACCTACCGAGATGGGTGAGT  
 GAGTGCCCTGTCTCTGGTGGGTGGGGGTTCTCAACCCAATGCTCTGTTCATGAGTGTTTTT  
 TGCTTTGACATTTGGTTTGTAGGGTTTGTGTTGTTGTTGTTGTTTGTGAGACGGAGTCT  
 CGCTCTGTCAACCGGGCTGACATGCAGTGGCATGATCCTAGCTCACTGCAGTCTCAAAC  
 [C, G]  
 GTGGGCTCAAGCGATCCTCCCGAGTAGCTGGGATCACAGGTGCACGCCACCACCCCGGGC  
 TAATCTTTTAAACCTTTTATGTAGAGATGGAGTCTTGCTGTGTTGCTCACACTGGTTTGG  
 GCTCAAGCAGTCTTCTACCTCGGCCTTCCAAAGTGCTGGGGTTACAGGCATGAGCCAAT  
 GTGCCTGGCCTGTTTTTAATATTTTTTAAACAGTGAGATAAGATCCCGGTTGAAATGAAG  
 ATGTTTCCCTGGTCCACAGCTCTCTGGAGCTTCCCTGACATGTATGCTGGAGGGACGCTT

35495 CAGTCTTCTACCTCGGCCTTCCAAAGTGCTGGGGTTACAGGCATGAGCCAATGTGCCTG  
 GCCTGTTTTTAATATTTTTTAAACAGTGAGATAAGATCCCGGTTGAAATGAAGATGTTTC  
 CCTGGTCCACAGCTCTCTGGAGCTTCTGACATGTATGCTGGAGGGACGCTTCTGGTCT  
 CCGGCCCTCCAGGCATACAGATGCCCTCCCAACCTGAGTAGGAAGATTAGGGTCCACGG  
 CCTCGCTGGAGCGGGTTAGAAGGCAGGAGATCTCCGGTCCCAGCCGTGTCTCCAGCCGCC  
 [G, A]  
 GACTCTCTCCAGCCCTGTCTCCAGCTGCCCCACTGTCTCCAGAGTCTGCCGTGTGGAT  
 GTTTAGAGGTGGGGAGCACCGTGCTTGGCTGAGTGCAGCTTGTGAGACGCTGCTCCCAAG  
 CACTGCAGACCTCACTCAGCCTGACGCGTCCGCTGAGGCCATCCTCGGTACTCGCATGTCC  
 CTTTGTCTTCCAGCGACTCTGGGAGGCAGGAGTATCTGTTCCAGTTCACATCTGCAAA  
 AGTCAAGCTCGGGTTTCAGTAGTGGCCCATGGCCCTTAGGTAGGGTGGCCCCATCGTGCA

36001 GGCAGGAGTATCTGTTCCAGTTCACATCTGCAAAAGTCAAGCTCGGGTTTCAGTAGTGG  
 CCCATGGCCCTTAGGTAGGGTGGCCCCATCGTGCAGGCTCCTCCCGTACCCCAAGGCAG  
 CCTGCTGGGGTGAGAAGCCAGGGGTCTGGGACCTTCTTGGTGTGATGTTGCTCTCCTGTC  
 TCTGGTCTTTGCAGGACTGCCTGTGCAGAGGTCTCCCGGCCTGTGACTTCTGCTGTCC  
 CGGCAGATGGCAGACGGAGGCTGGGGGGAGGACTTTGAGTCTGCGAGGAGCGGCGTTAT  
 [T, G]  
 TGCAGAGTGCCAGTCCCAGATCCATAACACATGCTGGGCCATGATGGGGCTGATGGCCG  
 TTCGGTGGGGACGACGGGACCGTCCCTGAGCCTTGGGTTTGGGTAGAGGAGGGACACTCA  
 GCTGTGAGCCGGTGGCCTGGGCTGAGTGAATGTAGAGAGGAGGGAGGCCCTGTGGCCAG  
 GTCAGCTGCCACTCTGGGAACAGACACCTACAAGAGCCACATGCCCTGGTTCTTGGGGCAA  
 GAACGTGGGCTGCTCTGACCAAGTGGGGCCCTGCAGAGAGGCTCGCCTCTTAGAAGTGAA

38948 ACAGCTCCCCAATGGCGACTGGCCCGAGGTATGCCGCCAGGGACCTGAGCGCACAAAGGCC  
 CAGCACTGACCTCCAGCGTGCATGGCTGTTTCCACGTCCCCCTGCTCTGTGTCTTTTTTG  
 GGGTACTTTGGACACTTGGGAGGCGTCACTCTGCCAGTGAATGCCACAGTTGGTGGCAG  
 GTCTGTGGCAGGTGGTGGGGTCTTAAAGTCCAGATCTTGCTGTTGTTTCAAGTGATGCTC  
 TGGGTGGGGAGGAGCTGGATGGGAGAAGCCAGTGGGCGGGAAGCCTTTTTGCTGCAGGA  
 [C, T]  
 AGACCTCTCCACTCCAGATGACCTAGTGCCCCCTCACTGAGCCAGAAGTCCCTGTGGTGT  
 GGGTGTGATGAGGTGATGTGAGGCCAACCGCCCTCCCTGGGATGAGGCTGAGTTGGTGG  
 AAGCTGATGTGGTTGTGAGGGGCTGGTGACCCTGGCTTAGGGTTTGTGTCAGGGCGGGGA

FIGURE 3Y



GTCTGAGCTGGGCTGATGGTGCCATGACTGATGCGGGATGGACTACTTGCTTTCCATATGC  
TCTTGCTTAATTAGCCCTTTCCAGGCTGACTCACCCACAAGCCAGCCAAGCCAACAGCCA

39160 GATCTTGCTGTTGTTTCAAGTGATGCTCTGGGTGGGGGAGGAGCTGGATGGGAGAAGCCA  
GTGGGCGGGAAGCCTTTGTGCTGCAGGACAGACCCTCCCACTCCAGATGACCTAGTGCC  
CCTCACTGAGCCAGAAGTCCCTGTGGTGTGGGTGTCATGAGGTCATGTGAGGCCAACCGC  
CCTCCCTGGGATGAGGCTGAGTTGGTGGAAGCTGATGTGGTTGTGAGGGCTGGTGACC  
CTGGCTTAGGGTTTGTCTGCAGGGCGGGAGTCTGAGCTGGGCTGATGGTGCCATGACTGA  
[T, C]  
GCGGGATGGACTACTTGCTTTCCATATGCTCTTGCTTAATTAGCCCTTTCCAGGCTGACTC  
ACCCACAAGCCAGCCAAGCCAACAGCCAGGGCTCCAGTTCAGGGACTAGCCCTCAGCTGA  
CTGGTGAAGCCTTTGTGTTTATTTCTCTGTGTTCTTTTAGGAAAACATTGCTGGGGTCTT  
CAACAAGTCTCTGTGCCATCTCCTACACGAGCTACAGGAACATCTTCCCATCTGGGCCCT  
CGGCCGCTTCTCCAGCTGTACCTGAGAGAGCCCTTGCTGGCCACCCCTGAGAACATGC

40405 TGTCATGGAGCCGCATACCCCTGGGTGTGAGCTCGCCTGCATATGCAGGGTCTGTCTATG  
GAACATCCCAAGTCTGTGTCAGCAGGGGAGCCCCATGCCCCCTGGGACATGAACCCACCTGC  
GTGGAATGCTGTTTGTGAGGTGCTACAGGGTTTATAGTAGTCTTTGAGACACAGAAATG  
CACAGGGGACACTTACGGACACAGAAATGCACAGGGGAGGCCGAGCATAACCAGGGGTGA  
GGGCGAGGCAGCAGTTGTAGTTACTGCCGCGGGGCACTGCTATGTGCAGGGACAGCCAGC  
[G, A]  
CCCAGCCCATCACCACTCCCTGGGCTGGCTGGCAGGTATGGCACCTGGGAGCCCGGCAT  
ATACCCAGGGCACCCCTACGGCTGCCGCCAGTCTCATGCCCAGGTGGGTGCTCTGGGCTG  
GAGCGAGGGCCAGGTTTGGGCCGAGGCTTCCCCAGGCAATCCTGTGAGCTCCCTTCAG  
CCTCTGACCCAGTCTGGTCTGGCTTGCTATGGATGTAGGGCTTGGGTGGGAAGTTCAGGT  
CCTGGCTTTGCCCTTTGCCCTGATGTGGATGAGCAGCTCACATGCTCAGGGCCACCTGAGAC

40794 CAGTCTCATGCCCAGGTGGGTGCTCTGGGCTGGAGCGAGGGCCAGGTTTGGGCCGAGGC  
TTCCCCAGGCAATCCTGTGAGCTCCCTTCTAGCCTCTGACCCAGTCTGGTCTGGCTTGCA  
TGGATGTAGGGCTTGGGGTGGGAAGTTCAGGTCTGGCTTTGCCCTTTGCCCTGATGTGGAT  
GAGCAGCTCACATGCTCAGGGCCACCTGAGACTGTCACTGCTCTCCCTGGCTACTGGGA  
GGAGTCACTGAGAGCTTCGTTACCCCTGCTGCCCTTGGCCAGGGCACACCCCTATACCTCT  
[C, T]  
ATCTGCTCTTCCCTCCCTGCCGCCCTTCTGGGCAGGTAGCAGTCCCTGGCCTCTCCCTCT  
GGCTGATCACTCTCCCTCAGGCAGTGGAGATCTGCGTCTGGACACCCCTCAGATCCTGTCA  
TTGCCCTGCCCAGAGTCTTTCAGGGGCACCCCTCTGCCCTTGGTGTGCGGTCCAGGGCTCTC  
ACCCAGGTGCCGCACCCCTCTGGGGTCTTCTGTCCAGCTCCCTTGGCCCATGTGCTGTAC  
TGACTCTCCTTGGGACTCGCCTGCCCTGCTCAGAGCCCTGCAGGGCTTGGTCAGCTGCCCTG

40961 GCCTGATGTGGATGAGCAGCTCACATGCTCAGGGCCACCTGAGACTGTCACTGCTCTCCC  
CTGGCTACTGGGAGGAGTCACTGAGAGCTTCGTTACCCCTGCTGCCCTTGGCCAGGGCACA  
CCCTATACCTCCTCATCTGCTCTTCCCTCCCTGCCGCCCTTCTGGGAGGTAGCAGTCCC  
TGGCCTCTCCCCCTGGCTGATCACTCTCCCTCAGGCAGTGGAGATCTGCGTCTGGACACC  
CTCAGATCCTGTCAATTGCCTGCCCAGAGTCTTTCAGGGGCACCCCTCTGCCCTTGGTGTGC  
[A, G]  
GTCCAGGGCTCTCACCCAGGTGCCGCACCCCTCTGGGGTCTTCTGTCCAGCTCCCTTGCCC  
CATGTGCTGTCACTGACTCTCCTTGGGACTCGCCTGCCCTGCTCAGAGCCCTGCAGGGCTT  
GGTCAGCTGCCCTGTTCAGTGTCAACACTTCCCTGCACATCTTAAACTGGGCTTTATTTT  
CGCTGAAGGAACGTGTGTGGGACCCCTTGACATCTGTCAGGTTTGCACATGCTGTTTTTT  
TTCTCAGCCCACGTGTTCTCCCCACGTGGGGTAGCAGCAGGACAGACAGTGAATCACAG

41891 AGGGAAAACAGATATTTTAAGAGATAATAGCATAGCCTATTTTAATATGTTTTAAAGGCC  
ATAAGCATATCCAGGAAGATAAAATAACGTGATACAATGTCCACATAGGAGGAACTTCT  
TTCACTGCATTGTTTTCCCTTACAGTGGCCTTCAAGTCACAGGACGCAGCGATTCCCTGC  
CCTCTTCGGTGTATTACACAGGCAGGACTTCAAGTGTGAGTATCCCTGCCCTTCACTCTC  
TTTAGAAATCACATCTGTGTTCAATCCATTGTTTAGAGGGAGTGTATTTTCCCTGTTCCA  
[C, T]  
GAAGAGGACTTTTTGTTTCACAATTGGATCACAAATGCAGAGGAGTCTGTTCCCTCCCCGTC  
GGCTTCTCGGTGCTGGGAGGGTGACCTGTCCAGATGACTCATCACCCTGACATGCTCTT  
GACAAAGGACACCACCAAGAGGAGATGGCAGCTGTACCGGTGCAGCCTCTGTCTGAGGGG  
GATATTTGCCCTCAGTGTGATTAAAAATCAGTCATGAAAGATTTTGAATTGAGATTATTT  
TTATCAGGAACAGATTTTGAACATCCTGAAATCTTTTCCCTGGCATCATATTAGGTTTTTC

FIGURE 3Z